STORAGE-ITEM
LPC-MAIN

LP9-P19A
U.B.C. LIBRARY

THE LIBRARY

Tuum est

THE UNIVERSITY OF
BRITISH COLUMBIA

Digitized by the Internet Archive
in 2010 with funding from
University of British Columbia Library

http://www.archive.org/details/curveofsocietalm00degr

THE CURVE OF SOCIETAL MOVEMENT

THE CURVE
OF
SOCIETAL MOVEMENT

A study of the nature of Sociology
in the light of
The Positive Politics of Auguste Comte

By

McQUILKIN DEGRANGE
Professor of Sociology
Dartmouth College

THE SOCIOLOGICAL PRESS

Hanover
New Hampshire

Minneapolis
Minnesota

Liverpool
England

1930

This volume is not copyrighted:
Its reproduction, in whole or part,
is authorized.

CONTENTS.

Preface 5

Chapter I. Introduction: The Solution of the Social Problem 9

PART I: THE RISE OF SOCIOLOGY.

Chapter II. Abstract and Concrete Sciences . . . 23

Chapter III. Logic, Physics, and Psychics 33

Chapter IV. From Social Physics to Sociology, "Properly So-Called." 49

PART II: THE SCIENCE OF SOCIALITY.

Chapter V. The Societal Fact 81

Chapter VI. Societal Statics 105

Chapter VII. Societal Dynamics 123

PART III: THE LAW OF SOCIETAL DYNAMICS.

Chapter VIII. The Law of Increasing Objectivity . . . 137

Chapter IX. The Law of Growing Productivity . . . 157

Chapter X. The Abstract Development of Sociality . . 171

Chapter XI. Conclusion: A Positive Politics . . . 197

Appendix 209

All Italics and all translations
are to be attributed to the author of this volume
except where otherwise noted.

PREFACE

WHAT is sociology? Despite all the efforts that have been made since the time of Comte, this question still remains unanswered The failure has thrown discredit upon the whole attempt to discover law in the realm of social phenomena. It embarrasses the student of sociology and keeps him on the defensive when his right to be considered as a man of science is challenged. It affords, too, a plausible excuse for the supercilious attitude toward him of natural and physical scientists,—who nevertheless pay tacit tribute to the importance of his work by striving to do it themselves.

So serious is this deficiency in sociological theory that it impairs and even jeopardizes the usefulness of the investigations so imperiously demanded by the social conditions of the time. It deprives them of a solid logical basis; and, what is worse, forbids that unity of conception and effort which is symptomatic of a right method. No wonder that under such circumstances the word sociology has almost become discredited. No wonder that it is little more than a label to be applied indiscriminately to a series of doctrines as widely varying as Historical Sociology, Educational Sociology, Rural Sociology, Psycho-sociology, Social Relief, Criminology, Anthropology, and International Relations. Nothing holds these divergent subjects together but a vague use of the term 'social.' No wonder that Victor Branford, among others, has proposed to set all these aside and make a fresh start. "As a first simplification," he says,[1] "let all the post-Comte sociologies, not demonstrably continuous with the 'preliminary' sciences, be written off the balance-sheet of philosophical reckoning."

In the spirit of these words this volume was composed, although written before they were uttered. It seeks to formulate a new definition of sociology, a definition that shall grow logically out of the work of the man who first clearly saw the need and the possibility of a science of social phenomena. It is therefore a return to the great line of thinkers that began with Aristotle, came into Western Europe with the Arabs, and runs from the Scholastics through Descartes to Comte. It seeks to apply to the task of founding a science of sociology the traditions of this long filiation.

Back to Comte, then. But back to Comte, with a difference. Not back to the Comte of the *Positive Philosophy*, and still less to the Comte of Harriet Martineau's condensation of that work in the ever useful series founded by the Messrs. Bohn.

No. It is a return to the product of the maturest thought of the great philosopher; it goes back to the Comte of the *Positive Politics*.

---

[1] SCIENCE AND SANCTITY, p. 92. LePlay House, London, 1928.

And why not? From the work of what other great thinker is one-half deliberately set aside and neglected to the point that its existence is forgotten? How can such an attitude toward a world philosopher be justified? None of the reasons currently assigned are satisfactory. Most of them show on the surface clear failure to grasp the significance of Comte's conceptions. They will not be dealt with here. This entire volume is an argument against them; and if the position taken here is held, they will disappear without further discussion. It will not be the first time that the stone rejected by the builders has become the head of the corner.

Such is the point of view of this volume. Begun with the profound feeling that the maturest thought of a great genius could not be the valueless thing Comte's later work is ordinarily asserted to be, it ended in the conviction that in it is to be found the solution of the philosophical difficulties that today stand in the path of the orderly development of the science of sociology. In the *Positive Politics* is to be found not merely the continuation of the classical philosophical tradition; in it is also a conception of the greatest import to the further growth of the social sciences as a whole.

It is all too often forgotten that Comte lived fifteen years after the completion of the *Positive Philosophy*—fifteen years of continuous application at the period of life when philosophical power is at its maximum. It is seldom observed that this continued application twice involved a reconsideration of the synthetic aspects of his work as a whole: once at the beginning of the *Positive Politics*, and again at the beginning of the fourth volume of that work. It has seldom been seen that Comte discovered a difficulty, a contradiction, even, in the conceptions that he brought from the *Positive Philosophy* to the construction of the *Positive Politics;* that the nature of this difficulty became clearer and clearer as he advanced through the latter work; and that in the fourth volume he came at last to discover the key to the solution of the logical inconsistency that he had felt from the very beginning of the second volume. And never has it been seen that he discovered at the same time the key to the difficulties in the social sciences of the present day.

This key he found in the word 'social.' Social phenomena are composite, not simple, specific and irreducible: that is the discovery in one word. 'Social' denotes a combination of phenomena, phenomena that when properly analyzed fall into at least two distinct classes, each of which demands a special science for its adequate treatment. Social phenomena, that is, are today on the same plane as the "physical" phenomena of the time of Aristotle, i. e., a mingling of the data belonging to several sciences, as was at last discovered in the early centuries of the Modern Era, when the 'physics' of the Greeks was analyzed into, respectively, a part of Astronomy, the present science of Physics, and modern Chemistry. Such is the discovery that removes Comte from the pantheon of men historically important and puts him in advance of the sociologists of today.

The two classes of phenomena into which Comte, after thirty years of thought, analyzed 'social' phenomena are the collective and the individual, or in the terms used in this volume the societal and the moral. Obviously a distinction for which so much is claimed with regard to the social sciences can not be set forth in a preface. To make it clear is, in fact, the task of the first two parts of this book.

But a word can be said here as to the scope of the results that this distinction effects. First of all, it provides a strictly delimited domain for the science of sociology, separating it once for all from the biological below it and the individual or moral above it. Second, it establishes, in opposition to all the current classifications of phenomena, a new and independent science in the hierarchy *above* sociology. Third, in the light of this distinction a statement is possible concerning the nature of psychology that adequately explains the confusion existing in all the doctrines that relate to that field of investigation. Finally, it provides an explanation of the movement of sociological phenomena—this is the task of the third part of the volume—on which a scientific guidance of political affairs may ultimately be based.

This work, in its original form, was presented to the Faculty of Letters of the University of Clermont-Ferrand, France, as one of the theses for the Doctorat ès-Lettres, Diplôme d'Etat. It is more than a pleasure for the writer to avail himself of the opportunity to express his indebtedness to the Professor of Philosophy in that university, M. Emile Lasbax, in whom are personified the qualities that have gained French scholarship the admiration of the world.

McQUILKIN DEGRANGE.

Hanover, N. H.
October 1, 1928.

This introductory chapter is intended to present the general position to the defense of which the volume as a whole is devoted,—namely the possibility of a true science of sociology.

This idea is at least as old as Condorcet and Comte, as the chapter shows. Of all the minds, however, to whom the idea has come, Comte's is by far the greatest. His genius is the most powerful that ever set out consciously to deal with the creation of a sociological science. Besides, it is upon his work that the present volume in the main rests. It is fitting, therefore, that something should be said of his personality, particularly since to do so affords an opportunity to deal synthetically with the nature of his—and other—genius after a method that Comte was the first to make possible. The discussion concludes with a very brief preparatory summary of the development of his thinking in sociology, in which the account is carried, for the first time, to the very end of his work, when as the result of his life-work as a whole, he was planning a complete revision of his earlier conceptions.

This task completed, the chapter ends with a statement of the main purpose of each of the three parts into which the volume is divided.

THE CURVE OF SOCIETAL MOVEMENT

CHAPTER I.

Introduction: The Solution of the Social Problem

NEVER in human affairs has there been a more pressing need than the present for a positive sociology: a science revealing the essentials of social order and the laws of social development. Without the guidance of such a science the best intentioned statesmen are wholly incapable of affording direction to a disorganized world. In the absence of such a science, there is no alternative: the greatest minds must be empirical; they cannot be other. When these lines were first written, representatives of many governments sat at one of the capitals of the world deliberating as to how the future might be freed, if only to a small extent, from the exhausting burden of military preparation. The supreme interest of the issues such conferences[1] debate forbids an easy cynicism as to the value of their results; yet what lasting good can come from deliberations guided by no principle of social science; from discussions characterized in fact by a complete absence of reference to the laws of such a science; from what are necessarily but traffickings in national advantage, envisaged of course from the standpoint of material interest? It is true an empirical decision may be a wise and correct one; but it is also true that the operation of social law is as inevitable as the operation of astronomical law. On the one hand, therefore, the wisdom of an empirical choice is but a happy chance,[2] characterizing only the particular decision in point and offering no guarantees for the future; on the other hand, the unrecognized and therefore unguidable impulsion of social development may cause the utmost disaster to the nation or people or age in which its ineluctable consequences are realized. Compare the results yielded in chemistry by conscious submission to law with those attained by the groping investigations of alchemy. A sociology reduced to positivity holds out far greater promise to the world than a chemistry become scientific.

In the present unsystematized state of thought in social affairs, men, even—or especially—when activated by the noblest desires are inevitably driven to the process termed in current language "rationalization." That is, they are prompted by their feelings to construct ideals; to adopt principles of action which seem to favor their aspirations; to conceive utopias which are mainly negations of the evils which attend contemporary society. Hence the swarm of current parties, liberal, conservative, radical, revolutionary, etc., etc., each with its platform of immediate reforms and ultimate demands, its "slogans," its "literature." The detached observer of human affairs is tempted to dismiss them all as the offspring of the wish which is notoriously father to the thought, and, if he retains an interest in political affairs at all, to join with the frankly cynical politician in a policy of opportunism, based on the denial of the possibility, even, of scientific guidance in human affairs. Yet such a decision, involving such a denial, is disastrous from every social point of view. Its immediate effect is to give full permission to the most selfish propensities of man for complete expansion, free of all control. This policy is, indeed, but another and the most dangerous form of rationalization, for it is merely the reflection of the purely personal and self-regarding interests.

---

[1] The conference alluded to in the text is the Conference of Washington, which inaugurated the series: Genoa, The Hague, London, Paris, Moudania, Lausanne, etc., etc. 1922

[2] As if to illustrate the text, the conference of Locarno not long ago occurred. Its outcome was undoubtedly in harmony with sociological doctrine; but it was so by chance rather than design; hence its lack of finality, its fragility, its uncertainty,—all due to its empirical foundations, resting on no systematic basis of recognized theory.

Such a mental state in a man otherwise of good will results from an exaggeration of the extent to which the rationalizing process is applicable. In fact, this concept of rationalization, which is new only in the more systematic interpretation today given it,[1] has definite limits, which have often been unperceived or ignored by the proponents of the more recent psychological doctrines.[2] These limits are clearly revealed by the lower sciences, beginning with mathematics. Men do not rationalize the solution of an equation; they do not rationalize Euclid; they do not rationalize the date of an eclipse; nor the power of an electric current; nor the results of a chemical analysis. In all these cases, rationalization is impossible in proportion as positive laws have been shown to be operative in the phenomena concerned. If men still rationalize a scheme of evolution or a political system, the fact is due simply to the absence of positivity in the higher sciences. What is wanted then is an extension of the positive method to the phenomena on the operation of which political affairs are ultimately based. What is wanted is the formation of a sociological "party," from whose program men will be as free to depart as they are to depart from the programs of the geometrical, astronomical, physical, or chemical "parties." The condition of the rise of such a party is obviously the creation of a science dealing with the phenomena at the base of society; the institution and the constitution of a positive science revealing the elements which must exist before society can come into being and without which it can not endure; and disclosing the laws which these elements follow in their combined development.

---

[1] "The least important judgment involving the exterior world might be formulated as a scientific problem, in which the mind strives to produce a conception in harmony with all its impressions of the without. The less clear these impressions are, the more the mind tries to supplement their lack of clearness by its own combinations, often very subtle or very indirect. When a judgment is urgently desired, the lack of exterior documents often leads to a pronunciation based upon purely interior opinions, due wholly to an energetic reaction of the heart upon the mind." La Politique Positive, Vol. I, p. 713; English translation, I, 576.

[2] A study of the gradual formation of the positive method "will always be indispensable to the formation of truly unshakable convictions. . . . Lacking such an initiation some profound thinkers have exaggerated the mental reactions of the passions of man to the point of believing that our interests could even destroy the simplest mathematical demonstrations." Pol. Pos., I, p. 416; Eng. tr., I, p. 337.

Now it need not be said that the conception just presented is not a new one. In fact, it is at least a hundred years old. It may be found expressed, even as to the idea of rationalization, in an article written in July, 1819, for publication in the French political review, *Le Censeur Européen*. In this brief piece,[1] the author, Auguste Comte, then a youth of twenty-one, strove to establish a separation in theory between opinions and desires in political affairs. His words, even after the lapse of a century, are worthy of meditation.

The starting point of Comte's comments was the existence in his day of two opposing theories in regard to political views: The governing classes contended that they alone were capable of correct political knowledge and that they had in consequence the exclusive privilege of holding political opinions; the governed contended that every man was capable, by unaided instinct, of correct political opinions and that they therefore had the right to assume the functions of legislation. Reviewing both these contentions, Comte was led to repeat Condorcet's observation that men who would not think of pretending to a knowledge of astronomy or physics without having studied them could see no absurdity in having definite opinions on the most abstract questions of politics without ever having taken the trouble to reflect upon them or to have given them special study. The phenomenon was obviously due, Comte saw, to the fact that politics had never been raised to the level of a positive science. Once it had reached that plane, everyone would at once see that it could be understood only after a study of the observations and deductions on which it was based.

Comte found, however, in each of the views just contrasted an element of truth. The governing classes were right in this respect: the question of the means by which political aims are to be reached is for men learned in political science to determine. The governed were right in this respect: the aims themselves may be decided upon by people in general without special instruction. In other words, it is possible and right to distinguish between political opinions and political desires. The first are for political scientists exclusively; the second for the public in general. "Opinion should will; publicists propose the means of execution; and the governing powers carry them into effect." "In a word, when once politics has become a positive science, the public will have to accord to publicists, and it will necessarily accord to them the same confidence in politics it now accords to astronomers in regard to astronomy, to physicians in medical matters, etc., with this difference, however, that it will reserve to itself the exclusive right to indicate the aim and direction of effort."[1]

---

[1] *Séparation générale entre les opinions et les désirs.* POL. POS., IV., appendix, p. 1; Eng. tr., IV, p. 497; EARLY ESSAYS, etc., p. 27.

To this central conception of politics as a positive science, Comte remained true throughout his life. Whatever the divergences that may appear between his earlier and his later conceptions, they are invariably due to the growing clearness with which he visualized his ultimate goal. In this respect, however deeply into theory he went, he always had a strictly "practical" aim; to make it possible to reform political conditions by putting political knowledge on a positive basis. It is, of course, this strictly practical aim that justifies Comte's inclusion among the social reformers brought into being by the upheaval resulting in the French Revolution.

In so far as his ultimate purposes are concerned, he was indeed a social regenerator. Yet the term, true as far as it goes, is wholly inadequate to characterize his activities as a whole. Alone among reformers he grasped the immensity of the task it was necessary to accomplish; alone among reformers he envisaged the almost infinite particularities of political affairs as a related whole, as a synthesis; alone among reformers he comprehended the necessity and the possibility of adapting the methods that had been essential to the development of the physical sciences to the construction of a political science. These superiorities are so great as to raise him wholly out of the class of reformers and to place him among those whose names are identified with the great advances in the intellectual development of the race; to give him a high rank among the philosophical geniuses of the world; to entitle him to stand beside Aristotle, Aquinas, and Descartes.

For the achievement of the task he felt called upon to undertake, Comte possessed a cerebral organization of unusual subjective power; his was a charismatic[2] individuality to a striking degree, eminent as regards head, character, and heart. These three divisions of the Cerebral Table[3] in which, at the height of his powers, he summarized the results of his efforts at a positive analysis of the soul will serve as outline for the discussion of his personality.

It goes without saying that he was eminent intellectually; but it is possible, in the light of his own analysis, to go further and discuss the relative power of the various constituent intellectual faculties. These faculties are divided, in the Cerebral Table, into two main classes: expression and conception. Of the two, the latter certainly possessed the greater inherent power. True, the former was equal to all demands made upon it; Comte's whole work is thickly set with admirable aphorisms which condense entire pages or even volumes of philosophic discussion; but nowhere is there a tendency toward the play of expression from sheer delight in its exercise.

---

[1] POL. POS., IV, general appendix, p. 3; Eng. tr., p. 2; EARLY ESSAYS, etc., pp. 29-30.

[2] This word, borrowed from F. H. Hayward's PROFESSIONALISM AND ORIGINALITY, is used here to emphasize the fact that Comte had always in mind the reduction to law of the highest manifestations of human life. See, for example, POL. POS., I, p. 405; Eng. tr., I, p. 366: "The old domain of supernatural grace is subject, like all other phenomena, to discoverable laws, which become the principal object of true philosophy."

[3] The Cerebral Table can be found in all editions of the POSITIVIST CATECHISM. The analysis of human nature upon which it is based is contained in POL. POS., I, pp. 669-731; Eng. tr., I, pp. 540-594. The different efforts which preceded the final formulation of the Table are reproduced in the appendix to Dr. G. Audiffrent's DES MALADIES DU CERVEAU, Paris, 1874. The Table is also reproduced in the appendix of the present volume.

The faculty of conception, in Comte's analysis, is subdivided into two groups of two faculties each: contemplation and meditation. The first group comprises the analytical and synthetical powers whence arise abstractions and concretions, and, from their combination, ideas; the second comprises the inductive and deductive powers, whence arise comparisons and coördinations, generalizations and systematizations, and, from their combinations, thoughts.

When this analysis is applied to the mind of Comte himself, the analytical faculty with its consequent power of abstraction, seems to be superior in inherent strength to the synthetical faculty. Many of his previsions of the future are indeed genuinely poetical in their quality of concrete visualization; but here, as in the case of expression, the faculty is usually exercized for some special end; it is not exercized for its own sake. In other words, Comte's intellect, when freed from extraneous considerations, tended spontaneously toward abstraction. There is an analogous difference as regards the meditative instincts.[1] The faculty of induction rises to whatever heights it is called upon to reach, but the spontaneous strength lies in the deductive faculty. Here, indeed, is the special quality of Comte's intellect. When it is free it always works in this way. If it is possible for an intellectual faculty to rise to the degree of intensity deserving the name of passion—and Comte was decidedly of the opinion that it was not—then Comte had a passion for order. He could not think otherwise, as even the slightest productions of his pen bear witness. First an acute analysis resulting in the establishment of distinctions and the discovery of essentials, then a majestic ordering of the materials so obtained in an all-comprehending systematization: such was ever the spontaneous march of his intellect.

Genius, however, it is slowly beginning to be seen—and no one ever emphasized the point more strongly than Comte himself—is more than a matter of intellect. It is a composite term which should embrace first of all the entire individuality and then the sum total of environing circumstances. In the individuality not only the intellect but the character as well plays an important part.[2] By this term is meant the combination of qualities by virtue of which conceptions are put into execution. The intellect plans; the character achieves. There are three instincts that compose this latter: courage, prudence, and perseverance. These three terms are but the psychical reflections of three essentially motor centers: the first giving the power of initiative, the second the power of restraint, the third the power of continuance.[1] The three serve to coördinate all the muscular activities of the being, just as the intellectual faculties serve to coördinate all the sense impressions,—each of the two groups, the intellectual and the active, being entirely general in its influence. Of the three, the least prominent in Comte's life was certainly the second. He did not indeed have a high opinion of its value to men engaged in theoretical activity, whatever its value to men entrusted with the control of practical affairs; and he regarded its predominance in a young man as an unfavorable sign. Far greater in the composition of his own character was the element of courage, without which he could never have entered upon the labors that the achievement of the task he had set himself imposed upon him. Most important of the three elements in its influence upon his own life was his extraordinary power of continuous application. In this respect, he might almost be called superhuman.[2] "A continuous labor of eighty hours, in which my brain never ceased to be in the highest degree of normal excitement, except for some short intervals of sleep" marked the beginning of the meditations whence arose, without a word of writing, the entire plan of the seventy-two lectures on the Positive Philosophy. The composition of each of his volumes, even the *System of Positive Logic*,[3] in which the entire field of mathematics is covered without a figure or a diagram, was first planned mentally from beginning to end, and then each chapter was reduced to writing with scarcely a correction. The tenacity with which he held to his own manner of life and to its ulterior goal is proof of the same quality of character. Where, since Saint Paul, can there be found a parallel to this unswerving fidelity to a profoundly felt mission?

---

[1] "The word instinct has in itself no other fundamental meaning than that which makes it apply to every spontaneous impulsion in a determinate direction independently of any foreign influence: in this primitive sense, the term is obviously applicable to the direct and characteristic activity of any faculty whatever, whether intellectual or affective." Positive Philosophy, III, p. 622.

[2] "Every individuality is ultimately constituted by the conditions of its activity, without which all the other attributes, intellectual and even moral, would become useless to men or to animals." Pol. Pos., I, p. 684; Eng. tr., I, p. 522. See note on p. 62 of this volume.

Now there is besides the intellect and the character a third element in the composition of the soul, and this is the most important of all despite the complete disregard of it in discussions of genius. This is the element to which Comte attributed the determining influence in the cerebral organization. He called it the "heart," and analyzed it into ten constituent elements to which he gave the scientifically accurate name of *affective motors*, on the ground that it is by their affections, good or bad, that men are finally moved to action.[4] In illustration of this point of view, suppose the case of an individual possessing the high properties of intellect and character already attributed to Comte: Is it possible to say whether the effective manifestations of such an organization will be essentially good or essentially evil; whether the powers of intellect and character will be devoted to personal or to social ends?[1] The intellect analyzes and synthesizes, compares and coördinates all impressions indifferently; the character is completely neutral, initiating, restraining, maintaining actions of whatever kind; the heart alone directs, by virtue of the nature of the impulsions it affords to the other cerebral elements. Hence the question of genius is not even put unless it implies and suggests an inquiry into the nature of the impelling forces of the individual. The notion of an intellect working without feeling for an end which has no human concern is as baseless as the notion of the *chimaera bombinans in vacuo.*

---

[1] Pol. Pos., IV, p. 236; Eng. tr., IV, p. 208.

[2] "Auguste Comte, speaking to me of the discovery of the law of Three States, discovered after eighty hours of continuous meditation, told me that this sustained attention had been the condition of his success." Laffitte, Cours de Philosophie première, I, p. 305.

[3] First and only volume of a treatise of four volumes to be entitled The Subjective Synthesis.

[4] "Our affective dispositions—we believe—inevitably determine our behaviour." Achille-Delmas et Boll, La Personnalité humaine, p. 251.

There are two classes of affective motors: the personal or egoistic, a
and the social or altruistic. The first class gives rise to the motives of h
interest and ambition, the second to the motives of sympathy. A life spent in disregard of worldly success, in the face even of penury, testifies to the strength of the second class of motive in Comte's mind. His career, indeed, serves to emphasize the values of the sympathies to intellectual effort,—a value that has never been adequately noted, and often never seen, because of the dominance of the metaphysical theories of mind. Yet no other element of the cerebral organization can supply a like degree of continuous inspiration. Personal or egoistic impulses are constantly varying; they turn from one object to another and are stimulated or remain passive as the objects which gratify them are acquired or altered. They may oppose one another and so nullify their native energies. The sympathies, on the contrary, find unceasing stimulus in those "others" without whom sympathy would have no meaning, especially when those "others" become groups or collectivities whose existence endures far beyond that of the individual.

Here, then, are two great classes of motives: on the one hand, the personal; on the other, the social. The Cerebral Table makes possible a much more detailed analysis.

At the very basis of the personal life are the motors of interest, five I
in number. The first three are the instincts of preservation, individual and racial. They are, in order, the nutritive, the sexual, and the maternal impulses.[2] Of these, the strongest and most marked in Comte's
individuality is the second. Affording, when strong, immense energy to Sex
the possessor, it is yet a source of the greatest peril to him if it is not subordinated to the higher motors. It is exceedingly poor in ideas, and leads usually to acts only. In Comte's case, its influence is only too clear. It led him to the Galeries du Bois, then to his union with and marriage to Caroline Massin, "the one really grave fault" of his life.

---

[1] See Comte's own discussion of this very question as early as the fifth volume of the PHIL. POS., *pp.* 344-345.

[2] The maternal instinct should be carefully differentiated from maternal love. The latter is a complex combination of almost the totality of the affective motors; the maternal instinct is purely egoistic; Comte gave it the general sense of "love of products."

It played its part, too, in his first attitude toward Clotilde de Vaux; but when once it had been sublimated it aided to provide the energy for the years of devotion to her memory which makes Comte's affection memorable among the sublime affections of history.[1]

Of the two other instincts of preservation, the first and the third played only their normal role in the individuality of Comte.

More important than the instincts of preservation are the instincts of improvement, two in number; the first destroying obstacles, the second collecting materials. In regard to these two, Comte was no exception to his own remark that the mind when free to choose will usually follow the first of these propensities. Its strength gave special flavor to his oral discourses, which were often illumined by flashes of mordant satire or even of bitter sarcasm, expressions that are markedly absent from his matured work, written when the higher instincts had had time to review the impulsions of the lower.

The group of instincts that Comte collectively termed "ambition" affords a transition from the purely personal instincts of interest to the purely social instincts of sympathy, for they are personal in their aim but social in their means of satisfaction. The first is pride, or love of domination and power; the second is vanity, or love of approbation and influence. Of these, the first, despite Comte's adoption of the career of a theorician, seems to have been spontaneously the stronger. When the equilibrium of his cerebral organization was broken by overwork and affective shock, it was this element which seemed to color the working of his intellect; it was this element, too, which seems to have been most easily disturbed in his later life. That he was not primarily moved by vanity seems clear when his lifelong disregard of opinion is considered; but the weakness is only relative, for he was easily moved by praise when it emanated from a source which he considered worthy. In short, in his mentality, vanity was a feeling and pride a propensity.[2]

Finally, there is the sympathy group to be considered, and here the special quality of Comte's heart is easily discerned. The social motors are three in number: attachment, veneration, and kindness, benevolence, charity, or universal love. The study of these impulses is as yet so imperfect that it is impossible to get a radical definition of the tendencies that underlie them; all that can be done is to give a general definition. Attachment, for example, seems to be imperfectly named, for it is the source of other manifestations than attachment as that word is ordinarily understood. Imitation, for example, seems to proceed from it as well as friendship. In Comte's case, this motor, the emotional source of artistic perfection, exhibits a relative weakness. Comte was never dominated by a desire for esthetic finish, itself a sentiment composed of the affective motor of attachment and the intellectual faculty of induction. Once more, as in the cases already discussed, the needs of any situation clearly presented by the intellect were always met, but there was never an attempt to pursue perfection of form for its own sake, the distinguishing characteristic of the artist mind.

---

[1] On this aspect of Comte's life, see Jane Style, AUGUSTE COMTE, THINKER AND LOVER, Kegan Paul, London, 1928.

[2] Each of the various affective functions "constitutes a true propensity when it becomes active and a mere feeling so long as it remains passive." POL. POS., I, p. 680; Eng. tr., I, p. 549.

Neither was there a love of submission, the active form of veneration. Comte could never be classed among those in whom submission is a dominant trait. The schoolboy praising the Spaniards for their resistance to Napoleon, the student leading his fellows in protest against an instructor,—these are not the acts of a nature which finds spontaneous expression in submission for its own sake. His feeling of veneration was strong, but it never reached the stage where it passed from the passive form to the active and became a true propensity. Here, as before, the instinct never failed in a needed case; no man ever showed greater real veneration toward those who deserved it, or a greater care in acknowledging indebtedness where it was due; nevertheless, this impulsion was not the distinguishing characteristic, the special quality of his sympathy.

This distinctive element must be sought in the remaining affective motor, the generic impulse, the consciousness of universal kind, the love for humanity in its widest sense. This it was which by its inherent strength colored his entire mental life, determined the direction in which his cerebral energies should be exerted, and gave the unity without which those energies are dissipated. This one of the affective motors seems to have special relationships with the other cerebral elements. Immediately connected with the intellectual faculty of systematization or deduction, it seems to be intimately related to the personal instinct of pride or domination, and so to the motors of destruction and sex. In fact, there seems to be a kind of cerebral synthesis among these elements, and when they are dominated by the generic impulse, they supply to the operations inspired by the higher instincts all the energy characteristic of the lower. The scientific study of this question is as yet only sketched. The future has many revelations in store in this important section of human and animal psychology.

Whatever these revelations may be, it is certain that the importance of the affections in the mental operations will be more and more emphasized.[1] It is therefore justifiable to say, in concluding this brief and imperfect analysis of Comte's cerebral organization, that his rank among philosophical geniuses is not fundamentally due to his intellect, which he himself considered inferior to that of Descartes or of Leibnitz;[2] it is due to the combination of intellectual power with remarkable practical qualities working under the direction of the highest social motives. The distinctive characteristics of his mental and moral life might therefore be summed up as a courageous persistence in generous[1] systematization,— in an organization of unusual innate power.

---

[1] "The man of genius is generally a man of passion. We may just as well attempt to run a steam-engine without fuel or water as to make a genius out of a being without strong emotions. A person without any emotions is without energy. . . . The activity of the mind depends to a great extent on the activity of the passions." Hollander, IN SEARCH OF THE SOUL, II, p. 215. Kegan Paul, London.

[2] "I am certainly superior to Bacon,—but I am not superior to Descartes,—think of the relation between the abstract and the concrete: nor to Leibnitz,—and the division between the two powers: but I am sure I am superior to Kant." NOTES SUR AUGUSTE COMTE PAR UN DE SES DISCIPLES. (Deroisin). P. 100. Paris, Crès et Cie., 1909.

Now this individuality, with all its potentialities, was subjected to the activating influence of one of the most stimulating social environments that history has ever described; namely, the movements following the outbreak of the French Revolution. The study of political reconstruction was imperiously demanded, and has ever since remained the order of the day. In other and theological terms, there was a "call" for men to devote themselves to the solution of the great social problem which the French Revolution had formulated but not solved. This situation was the sociological element in the effective genius of Comte.

Biologically, Comte came of sound stock. He was endowed with a physical constitution of remarkable vitality, which resisted the emotional strains that were put upon it longer than would have seemed possible. Excessive over-work and moral over-strain required fifty-nine years to undermine the foundations that heredity had provided as the physical basis for Comte's career. His temperament seems to have been that sometimes described as the arterial-nervous type,—probably the most favorable of all the combinations of the elements of the body for mental labor. And finally he was born in the country which centuries of history had made the center of the advanced section of the peoples of the world; a country which climatic conditions had rendered most favorable for sustained activity.[2] All these influences, historical and geographical, played their part in shaping his personality.

Such were the different elements which, by their combination, gave birth to the genius of Comte.

By a happy chance he received a unique education. He had the great fortune to fall into the hands of a gifted teacher, Daniel Encontre, who early initiated him into mathematics, the science which Comte declared to be the basis of all true education. Next, he received a comprehensive training in the physical sciences at the École Polytechnique. Finally, under Saint-Simon, he was directly urged into the path whither his mind had always been spontaneously tending, i. e. the study of the social sciences in general; and in this way he at last discovered himself. Thus he not only traversed the entire hierarchy of the sciences but he did so in the hierarchic order. He may therefore justly be said to have been the first man in the world to have received a scientific education in the double sense of the term.

---

[1] It is not a mere philological coincidence that gives the same root to the words 'genius' and 'generosity.' The two qualities are intimately related in the soul of man.

It should be noted that the combination of affective motors indicated above: the sexual motor, the motors of destruction, domination, and benevolence, is an essentially masculine combination. The corresponding feminine combination is the following: the maternal motor, the motors of construction, vanity, and veneration.

It is even possible to hazard the idea that the almost exclusive presence of intellectual genius in men is due, in the last analysis, to the predominant influence in the masculine combination of the motor which Comte called benevolence or universal love.

[2] On this point consult: Ellsworth Huntington, CIVILIZATION AND CLIMATE, Yale University Press, New Haven, 1915.

It was during his association with Saint-Simon that Comte heard the "call" to a philosophic career in the field of politics. He was not the only one to hear such a call; to be activated, that is, by the stimulus of social needs to devote himself to political study; but he was one of the few to possess a mental organization capable of meeting the high requirements of the call. His intellectual power, itself of the first order, was impelled not merely by ambition but by sympathy; he was therefore among the "chosen," as possessing the eminence of heart, character, and head to meet the needs of the situation. Quickly he saw that political affairs could be regenerated only by raising political science to a positive plane; he soon perceived that this result could follow only from a knowledge of the proper domains and the distinctive methods of the sciences introductory to politics; and when he had grasped the necessity of this approach to the desired goal, his life was fixed, once and for all.

With a clear understanding of the difficulty as well as of the necessity of his task, Comte set himself, in the face of the most disheartening handicaps, to write his *Cours de philosophie positive.* The achievement cost him twelve years of the most arduous labor. Beginning with mathematics, he passed by regular gradations through astronomy, physics, chemistry, and biology, until in social physics he came after eight years of labor to envisage politics from a positive point of view. Only then did he reach the position whence he could begin the construction which his earlier writings had always announced as his ulterior purpose. Thus it was not until 1854, after nearly thirty years of preliminary effort, that the work that had ever been his ambition and aim was completed,—the creation of a Positive Politics.

In all this progression there is an uninterrupted continuity of development. Comte's thought advanced steadily from one position to the next. There may be a discontinuity of method at one point,—the question will be discussed at the appropriate place,—but what is to be emphasized is the fact that Comte advanced with unfailing logic from one standpoint to another as he perceived conclusions that were at first hidden; as he analyzed more finely the phenomena with which he was dealing; as the implicit became explicit.

The most striking and important instance of this regularity of advance is to be found in the case of sociology. Comte's first step toward a positive politics was his establishment of social physics, the culmination of the hierarchy of the sciences as it is presented in his *Positive Philosophy.* The original conception of this science, for which he later constructed the word *sociology,* was refined and given increasing precision all through the *Positive Politics,* until at the end of that work he was speaking of sociology, "properly so-called," "definitively constituted." [1]

---

[1] Pol. Pos., III, pp. 48, 49 and IV, p. 209; Eng. tr., III, pp. 40, 41, IV, p. 201.

In other words, he developed his conception of social physics as he continued to meditate upon social problems, and ended by discovering that this department of positive knowledge was not a single new science, as he had originally considered it to be, but a combination of two abstract sciences, entirely independent, each with its distinctive doctrines and method.

To trace the development of Comte's thought from the first of these conceptions to the last is the purpose of the first of the three parts into which this volume is divided. *The inquiry is of the utmost importance, for it leads to the conclusion that Comte never wrote a sociology,—in the definition, that is, of that science which he reached as the results of his labors as a whole.* The assertion can be fully supported; it is indeed Comte's own statement, as will later be seen; it follows equally from a study of the entire evolution of his thought. Once this fact has been established, it will be possible to approach the task of instituting such a science on the basis of a definition of the fundamental fact with which sociology deals. Comte's work supplies the starting point and, when supplemented by Sumner's, the material for the attempt. To give this definition and to outline the static and dynamic aspects from which this fact may be viewed is the purpose of the second part of this volume. The third part aims to present the basic laws that govern the sociological fact in its development, and to study these laws in their combination. The final chapter discusses the bearing of the volume upon the problem of founding a positive politics.

PART 1

THE RISE OF SOCIOLOGY

This first part is devoted to an account of the rise of the conception that a true science of sociology is possible. Obviously, such a conception is fully comprehensible only in the light of the whole course of scientific development. The third chapter presents this perspective.

Before such an historical review can be truly significant, however, it is necessary to determine, more accurately than is usually required, just what is the nature of the science to which the term 'sociological' is to be applied. The position here taken in this connection is that on which Comte built the whole of his work,—namely, the distinction between abstract and concrete sciences. But it should be emphasized at once that this distinction is no mere personal invention of Comte's. On the contrary, it is implied in the whole history of scientific thought, Comte simply making explicit, in the light of hints from earlier writers, what was before only implicit. The example of Gilbert, starting with amber and ending with electricity, is strictly in point.

Because of its importance to this volume, the distinction referred to is here presented in three forms: first in Comte's own words; then in the exposition made of it by Laffitte, his follower; and finally in the more special explanation given by de Roberty On the basis of these presentations, the conception is expanded into a full definition.

It is clear that such a discussion cannot avoid being abstract and difficult; the reader who prefers to do so may omit the chapter, but he will then be bound to accept its conclusions in his further progress through the book.

CHAPTER II.

Abstract and Concrete Sciences

AT the very basis of the positive philosophy, from the logical point of view, is the distinction between the two kinds of sciences: the abstract and the concrete. There are, it is needless to say, other useful classifications of the sciences, but they are not to the point as regards their evolution and their enchainment. From this aspect, the distinction just referred to is essential; it is the primordial difference; the condition *sine qua non* of the construction of the encyclopedia of the sciences with which Comte's name is identified.

Interesting as it would be to trace the history of the conception of this difference and follow its development in the mind of Comte, the task would lead too far from the essentially expository purpose of the first part of this volume. Suffice it to say that the general thought goes back at least as far as Galileo, and that Comte derived it, in all probability, from Descartes, giving it in his turn the logical development, the systematic extension, and the scientific generalization that are the special traits of his genius.

In accordance with its logical importance, the distinction between the abstract and the concrete sciences is explained at the very beginning of the *Positive Philosophy*, which is indeed inconceivable without it, and it is never lost sight of in all Comte's later works. It appears in the *Discourse on the Positive Spirit;* in the *General View* of *Positivism;* in *The Positive Catechism;* in volumes one and four of the *Positive Politics;* and finally in the introduction to the *System of Positive Logic*, the first and only completed volume of the *Subjective Synthesis.*

A concise explanation of this indispensable conception is found in the first chapter of the Fundamental Introduction to the *Positive Politics*, where Comte asserts that every truly encyclopedic conception rests upon this fundamental distinction between abstract and concrete speculations. "These two orders of contemplation" he continues, "differ so greatly that they ought, in my opinion, to be separated in our cerebral constitution. . . . Observation is concrete or abstract according to whether it concerns beings or events. Although these two modes concur in all our intellectual constructions, the first, essentially synthetic, is better fitted for art, esthetic or technical, and the second, analytical in nature, is especially applicable to science proper." [1]

"This general distinction [is] essentially equivalent to that which exists between the speculations which are composite, or reducible to others, and the speculations which are simple or irreducible. The first might be entirely deductive if all their elements were sufficiently known to us and if our logical power became sufficiently great. On the contrary, the second always require as many inductive bases as are proper to them, whatever preponderance deduction may afterwards acquire in them."[1]

---

[1] Pol. Pos., I, p. 424; Eng. tr., I, pp. 343-344.

"Everyday good sense has always recognized that there is no rule without exception; but, at the same time, philosophical reason has never ceased to aspire to invariable rules. These two appreciations, which seem incompatible, are nevertheless equally sound when considered from a suitable point of view. Their natural reconciliation always results from the distinction between simple or abstract laws and concrete or composite laws. The latter can be particular, while the former allow of a full generality, which constitutes their true merit. All the different elements of each existence are respectively subjected to invariable laws, common to all beings whatever in which is found the same event. At bottom, it is in this that consists above all the natural order, the true notion of which, in no wise deductive, always sums up the corresponding inductions, aided by suitable analogies. If the elementary laws whence it results were not entirely general, our rational previsions would allow of no security. But this indispensable generality, the sole source of a precious coherence, is never obtained except in the light of an abstraction which more or less alters the reality of our theoretical conceptions. Since events can be studied only in beings, it is necessary, in fact, to set aside the circumstances proper to each case in order to study the common law therein. It is in this way, for example, that we would still be ignorant of the dynamic laws of gravity if we had not first made abstraction of the resistance and the agitation of environments. Even in regard to the least important phenomena, we are then obliged to decompose in order to abstract before being able to obtain this reduction of variety to constancy that is always sought by our sound meditations. Now these preliminary simplifications, without which true science would not exist, everywhere require corresponding restitutions, when it is a question of real previsions."[2] . . . "Entire generality is then incompatible with perfect reality. Our true logical regime requires that these equally indispensable conditions be first suitably separated in order afterwards to be combined wisely."[3]

" . . . Under the positive regime, as is already indicated by the preliminary cases in which it has been able to be partially sketched, . . the theoretical and the practical genius are equally called upon to discover laws, i. e. relations, alone in conformity with our real means and also with our real needs. They differ only in that the first seeks the general laws of each class of possible events and the second the special laws of each existing being. But this distinction is reduced at bottom to a simple fundamental division, both spontaneous and systematic, of the whole sum of human labor, the nature and the purpose of which are everywhere the same. For we study events only in order to ameliorate beings. Our providence can become rational only by a sufficient prevision, which requires general laws. Now this generality always implies the preliminary decomposition of particular existences into universal phenomena, alone susceptible of invariable rules. It is in this way that the sound constitution of logic rests upon the general distinction between abstract study and concrete study." [1]

---

[1] Ibid.
[2] Pol. Pos., I, p. 426; Eng. tr., I, p. 345.
[3] Pol. Pos., I, p. 427; Eng. tr., I, p. 346.

In the same way, in the last volume of the *Positive Politics*, in a discussion of the general nature of science, Comte repeats: "Our real speculations can not attain to their essential destination without always offering an abstract character, consisting in the coördination of events, independently of beings. To direct either our obedience or our intervention, natural laws must present an entire generality, never possible in respect to concrete cases. Our conduct remains undecided so long as we have not instituted rules without exception; which implies that the study of beings has been replaced by that of events. Phenomena can be manifested only in their seats; and substances become appreciable only in the light of their properties. Despite this double connection, the abstract genius can institute an habitual separation between events and beings by considering at one time the attribute common to several bodies, and at another time the sum of the qualities that compose each existence." [2]

Synthesizing the ideas just cited, Pierre Laffitte constructed his theory of "the state of reason." This theory is worthy of reproduction, not only for the greater precision it gives to the general distinction between abstract and concrete science, but also for the clearness with which it presents the mechanism of the process by which the cleavage between theory and practice is bridged.

The state of reason consists in a representation of the exterior reality with the degree of approximation permissible in view of the knowledge already acquired and the needs of exerting a modifying action on the world, on society, and on man. It is a relative equilibrium of human reason.

"Cerebral equilibrium is best produced in the practical reason, which must therefore be precisely defined. Practical reason consists in the conceptions related with a view to the immediate modification of things. The characteristic of the practical reason is thus its profound reality, since the views which constitute it are in immediate relation with a perfectly determinate exterior aim, which furnishes at every instant verifications that are related to man's most intense interests and propensities."

"But this practical reason, even though it is characterized by a perfectly determinate reality, presents inconveniences and deficiencies which should be pointed out. The elements which constitute it are most often confused and implicit to such a degree that it cannot be formulated, and consequently cannot be transmitted otherwise than by example. Besides, it is too special and too incoherent. It is in fact bound up with wholly particular cases; so that new meditations and observations are required when it is necessary to turn from one case to another, even very closely related. It is to these very conditions that incoherence is due, because a too intimate relation with particular cases makes it impossible to seize the characters which are common to them all. These inconveniences become more serious and compromise the practical end itself when operations on the world, on society, and on man become extensive and complicated. Hence the necessity of remedying these disadvantages,—an end which is attained by the theoretical reason."

---

[1] Pol. Pos., I, p. 428; Eng. tr., I, p. 347.

[2] Pol. Pos., IV, pp. 170-171; Eng. tr., IV, pp. 151-152. The same idea is found in the Introduction to the System of Positive Logic, p. 7.

"The theoretical reason consists in a general appreciation of the fundamental conditions of the existence of things, without any immediate purpose of practical application. To attain to this end, the theoretical reason is, in fact, obliged to eliminate all the special and particular considerations which are indispensable to practice, but which at the same time prevent the seizing of that which is fundamental in things, and, consequently, common to the different cases. The theoretical reason, then, constructs a picture of reality reduced to its essential conditions. Its most decisive character consists in coördination. It can, however, be constituted in reality only by systematizing a distinction which the practical reason takes into account only in an implicit manner: the distinction, namely, which divides the theoretical reason into two forms: the abstract and the concrete. The abstract reason relates to the laws proper to the different orders of phenomena, and the concrete reason to the totality of general theories which relate to beings. This great distinction has at bottom presided spontaneously over the mental evolution of the species, but it was Comte who definitively established it."

"In fact, if all that surrounds man is envisaged as a whole it is clear that the beings with which he is in relation manifest themselves to him as a coördinated sum of particular phenomena. But a more profound examination is not slow to reveal that all the phenomena whose combination produces the various beings are limited in number and that they present various degrees of complication. Taken in isolation, these various phenomena become abstract properties, the consideration of which serves as the basis of science, without actually becoming science in the proper sense. Long experience, very difficult to gain, which indeed could at first be instituted only in the very simplest cases, shows that these phenomena vary according to regular laws. The study of these laws constitutes abstract science. The different departments of abstract science are instituted according to a progression which is shown in the hierarchic encyclopedia of the sciences that Comte constructed" on the basis of a succession of irreducible phenomena, each group less complicated in its manifestations than that which follows it.

"How, now, does the abstract reason, based necessarily upon the in-

dications of the practical reason, react upon the latter and remedy its inconveniences? For greater precision the answer may be given from two points of view: first, where it is a question of acting upon things; 1
and second, where it is a question of acting upon society and man. 2
In the first case, when a being is modified, action, in fact, is never directed upon anything but a phenomenon; but the practical reason always considers this phenomenon in correlation with other phenomena, whereas the abstract reason isolates it from them and considers it separately. The latter procedure allows of the relation and comparison of similar cases, and the consequent utilization of such relationships; it allows also of the imagining of a great variety of possible cases which immediate action does not indicate, and thus infinitely augments the power of modification. In the second case, where action upon society and man is in question, the special and more or less incoherent character of the practical reason forbids a general understanding between men. Such an understanding, on the contrary, results directly from the general laws of abstract reason, which thus becomes the condition of the coöperation of generations, not only those in being but also those past and to come. Thus the theoretical reason has for its supreme mission the tracing of an ideal limit towards which all individual effort must tend and converge."

A harmony between the practical and the abstract reason is thus the first fundamental condition of any state of reason that is to accord with a developed and complex situation of human society.

But, at this point, a difficulty arises. "There is so great a distance between the two types of reason that harmony between them is usually insufficient. The abstract reason considers only phenomena; the practical reason their modification, but only in a special and determinate being. Now the latter necessarily presents itself in the extreme complication characteristic of every real being, even that which at first seems the simplest. There must be an intermediary between the two types. Hence arises the necessity for the concrete reason, which has for its aim the general study of the different beings conceived of as combinations of the various phenomena studied by the abstract reason, with such special coefficients as may be necessary. This general study of beings is abstract in the sense that it is not concerned with determinate individuals, but it is related to them by an infinite sequence of intermediaries."

"For the concrete reason to be able to fill the rôle just summarily indicated, it must be in harmony with the abstract reason" on the one hand, and with the practical reason on the other. This harmony is obtained, as regards the first, by the fact that the concrete reason is a combination of the various laws of the different groups of irreducible phenomena which the abstract reason studies. It is obtained, as regards the second, by the immediate verification which practice involves. Thus, then, there is a direct series of relationships between immediate practice and the most general theory: any modification of a single being is made in the light of the combination of the laws revealed by the operation of the phenomena which together make the being manifest to man. Thus NB
the abstract reason furnishes the ultimate goal for action, the practical

reason the immediate goal, while the concrete reason bridges the gap between the two, for it deals with abstract beings and so serves as intermediary between abstract laws and special beings.[1]

NB

The result is a general coördination of the reason toward the same end: the improvement of man's existence; and the state of reason exists when, in any cultural period, there is a consistent coördination between the three types of reason, this coördination being judged in the light of the existent sum of knowledge and the requirements of intervention.

A more special discussion of the difference just defined between the two varieties of science can be found in the *Sociology* of de Roberty.[2] There are, says de Roberty, three kinds of sciences: descriptive, abstract, and concrete. Of these, the first is not really fundamental: description is a method applicable to the other two classes. It is the distinction between the abstract and the concrete that is important. An abstract science studies certain natural aggregates which it chooses as best exemplifying the manifestations of an irreducible property of matter: its ultimate purpose is to arrive at a distinct knowledge of this property. A concrete science is one which studies aggregates of aggregates,—already studied by the different abstract sciences,—in order to reach an analysis of these complex aggregates, but with this inevitable difference in the result: it never attains to the knowledge of a new irreducible property, since the aggregates which it studies are composed of only the properties already studied by the abstract sciences; nor does it gain any new knowledge of the irreducible properties themselves, for then it would be encroaching on the ground of the abstract sciences.

An abstract science analyzes the particular object it studies into certain elements or properties; a concrete science studies the combinations in nature of the aggregates already analyzed. But such a combination of objects, such an aggregate of aggregates, can evidently contain no new elements or factors which were not contained originally in the particular aggregates of which it is itself composed. Whence it follows that a concrete science is in reality only a combination of abstract sciences united for a special end.

Geology, for example, is a true type of concrete science. Now geology is neither concrete physics, nor mechanics, nor chemistry, nor biology. Its aim is to study an objective synthesis as it exists in reality; a synthesis which is studied by no other science and which forms neither the point of departure nor the point of arrival for any abstract science. On the other hand, the abstract sciences start with a single quality common to a whole mass of objective existences,—a quality which is irreducible,—and strive to reach a distinct knowledge of the laws of this property. Meteorology is another example of a concrete science. The phenomena of weather are evidently combinations of astronomical, physical, chemical, biological, and even sociological phenomena; each of these classes requiring its own special theories. Were the abstract laws sufficiently known, then the whole difficulty would be to combine them so as to deduce each composite result in the order in which it would occur.

---

[1] Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, pp. xxx-xl, *passim*.

[2] E. de Roberty, LA SOCIOLOGIE, second edition, Alcan, Paris. Pp. 28-38, *passim*.

Thus, in the light of this whole discussion, the laws discovered by a concrete science are always, in the last analysis, reducible to simple deductions from the laws of the abstract sciences. The concrete sciences are in theory exclusively products and not factors or elements; and they are for that reason described as synthetic in contrast with the abstract or analytical sciences. In the same light, the abstract sciences must rely upon inductive methods for the discovery of their laws; the particular properties or modes of being that each studies, being irreducible, must be studied in and for themselves; advance is made only by the slow accumulation of fact upon fact until new inductions are possible. The concrete sciences, however, are aided by every advance in the abstract sciences, for every such advance affords new bases for deductions covering the special fields of the concrete sciences. Hence the latter do not have to rely upon their own inductions solely but avail themselves of deductions from the laws of the abstract sciences; and they avail themselves increasingly of this resource as the abstract sciences are themselves perfected. *In conclusion, then, there are two essentially distinct varieties of sciences: on the one hand, the sciences which study classes of specific and irreducible phenomena, i. e. properties, and are therefore abstract, analytical, inductive, fundamental, and primary;* 1 *on the other hand, the sciences which study composites of phenomena, i. e. beings, and are therefore concrete, synthetic, deductive, derived, and secondary.* 2

The distinction above has no doubt been insisted upon in this chapter to the point where iteration becomes tiresome; nevertheless it is so important from every point of view as to excuse, if not to justify, this insistence. In fact, the science of sociology is dependent for its unchallenged right to exist upon the rigid maintenance of this distinction. Much, if not all, of the present uncertainty and confusion in the fields 3 of the higher sciences in the encyclopedia is the direct result of an ignorance of the distinction or a failure to observe it. No doubt it requires an uncommon effort of analytical power and abstract thought to comprehend its significance; but only intellectual disorder can follow its neglect. Comte himself, as will be seen, did not at first apply it as rigorously as it demands to be, with the result that he never reached a final definition of sociology until too late in his life to apply it systematically.

There are two considerations of importance to scientific development suggested by this distinction between abstract and concrete sciences which it is worth while to signal here. One relates to the future, the other to the present.

In the ~~first~~ place, it is now possible to foresee the time when the concrete sciences, in the sense in which they now exist, will disappear as having no longer an excuse for existence. This time begins when all the abstract sciences have reached the degree of positivity in which their main and secondary laws have been adequately determined. In this period, it will be possible to combine the laws of these sciences to meet the needs of any concrete problem; hence the concrete sciences of today will disappear and their places will be taken by an immense multiplication of the special applications to particular cases to provide for which the concrete sciences were originally developed. In other words, deduction, in these special cases, will take the place of induction; and the gap between the theoretical and the practical reason will be bridged by special constructions made for the particular needs of the given occasion.

In the second place, as has just been implied, until the degree of positivity just described has been reached in the abstract sciences, there will be need for concrete sciences based on special inductions. In this period, therefore, there will be a great variety of such sciences with conflicting claims and methods. Until the abstract sciences have all been clearly delimited, it will be impossible to define the constituent elements of a given concrete science. Obviously, a science which is in fact concrete, i. e. a combination of the laws of the abstract sciences, will be able to claim a degree of independence before its phenomena have been analyzed that will be impossible to justify or sustain after this analysis has been made. Obviously, also, the concrete sciences which deal with the phenomena at the higher levels of the hierarchy, i. e. the last phenomena to be recognized as specific and irreducible, will be the last ones to be reduced to their proper subordination, and for a long time will be able to challenge the primacy of the higher abstract sciences themselves. Obviously, again, a concrete science which deals with a combination, say, of but two classes of abstract phenomena, and those the very highest in the scale, will be the most difficult of all to analyze and subordinate. And, finally, until this process of analysis and subordination is completed, there is bound to be confusion, overlapping, and conflict in the whole upper half of the hierarchy. That such is the present state of affairs in the sciences which deal with vital, social, and moral phenomena is clear; and it can be ended only by the gradual establishment, in the light of a more thorough analysis than has yet been made, of the existence, specificity, and irreducibility of phenomena which have hitherto, for the reasons just indicated, been regarded as abstract, when in reality they are composite and concrete.

In the light of the capital distinction on which this chapter has insisted to such length, Science, in its essence,[1] carried, that is, to its high-

---

[1] "With the study of abstract relations, we penetrate into the world of science, the world of true and high abstraction. Here is no longer found the arbitrary, the fantastic, the capricious, the personal. An abstract relation is, or it is not. To establish it, there is needed a rigorous and consequently difficult demonstration, which requires the intervention of the highest human faculties. But once demonstrated, the relation imposes itself by its own weight: it is permitted to no one not to believe in it and not to accept its consequences. The sum of known abstract relations constitutes Science, divided into as many parts as there are abstract phenomena of different order." Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, pp. 57-58.

Science

est degree of abstraction, is nothing but the sum total of the abstract relations established between abstract phenomena. Its growth, its development, its evolution are but the history of the successive steps in the establishment of specific and irreducible properties and the discovery of their laws. To trace this history in its main outlines, and to mark the place held therein by the science of sociology, is the task of the following chapter.

A synthetic view of the whole course of Science, in the light of the distinction between the abstract and the concrete sciences: such is the chief content of chapter three.

It is prefaced by a brief examination into the conditions on which depend the rise of scientific law.

Out of it comes the conclusion that the whole history of scientific inquiry may be formulated as the achievement of a three-fold task,—namely, the reduction to law of three great domains, the mathematical, the physical, the psychical, each of which has been the center of interest of an historical period, the last having fallen to our own time to deal with. The task has been complicated by the ancient distinction between 'natural' and 'moral' philosophy. Modern investigation has destroyed the logical foundations of this distinction; but in practice it still profoundly affects the current conceptions of biology and so all the higher sciences. Hence the nature of biological science had to be critically examined.

Once the general aim of scientific inquiry had been established, it was easy to determine the place occupied therein by a science of sociology; and thus the way was opened to an appreciation of Comte's labors, for the clue had been found to the understanding of his entire intellectual evolution.

hierarchy
of sciences

CHAPTER III.

Logic, Physics, Psychics

ABSTRACT sciences and concrete sciences: the more deeply the significance of this indispensable distinction is felt, the more precisely it is defined, the clearer it becomes that in the last analysis it is to the systematic application of this distinction that is due the most rapid progress, the most salutary transformations in the evolution of the intellect. To it alone is due the establishment of new classes of irreducible phenomena, the inductive discovery of the laws that these phenomena follow, and finally the abstract conception of Law. The successive steps in the institution and constitution of new abstract sciences, ending as a logical sequence in the general notion of Science: such is the content of this chapter.

But before entering upon this historical effort it will be advisable to render more precise the essential condition on which depend, in the first place the laws, and next the Law that the scientific mind aims to establish. In this examination, the synthesis that Laffitte made of Comte's conceptions will be the guide.

"The principle of immutable laws," says Laffitte, "is not absolute but relative, depending at once upon the nature of the world and the nature of our brain, i. e. upon conditions both objective and subjective.[1] It results from the action of the cerebral organs upon the elements furnished by the exterior world, a relation which requires a certain regular stability of the exterior or objective world and a certain regular stability of the interior or subjective world. The within and the without are associated, man and the world each furnishing a part, and social evolution brings the work to perfection.

"These different elements will be discussed in turn.

"Of the subjective conditions in question, none intervenes more directly or more actively than the [mental] tendency to construct the simplest hypothesis possible in the light of the sum of information possessed. In fact, the simplest hypothesis that the mind can first frame is that succession and constancy are everywhere to be found."

---

[1] "The works of the great philosophers from Aristotle down to Hume and Diderot have resulted in the discovery in the conceptions of man of the two parts systematized by Kant under the terms *subjective* and *objective.* When we examine any intellectual production whatever, esthetic, scientific, or technical, normal or abnormal, we always note that the *materials* there found in combination are furnished through the senses by the exterior world: this is the *objective.* But the *connections* binding these elements,—elements that are necessarily analytical since each sense makes us aware of only certain attributes of beings,—are due to the characteristic activity of the brain; they constitute the *subjective.*" Mendes, LA PHILOSOPHIE CHIMIQUE D'APRÈS AUGUSTE COMTE, p. 19. (The italics are those of the original text).

"Nevertheless this analogical disposition of mind can lead us only to admitting the existence of a law; it is of itself impotent to discover it. For this higher achievement, new conditions are necessary: our brain must be endowed with certain faculties and these faculties must have attained to an adequate degree of development."

"The first of these necessary faculties is contemplation. Every law rests upon it, the least of them implying innumerable and difficult observations. But for contemplation to render the services required of it, it must be, on the one hand, sufficiently stable and, on the other, sufficiently precise. Had it lacked stability or precision, very certainly the principle of natural laws would not have come into existence."

"The need of stability is evident. Observation incapable of being applied to the same object for a certain time is without value."

"Precision is no less indispensable than stability. The power of our brain to apply itself to the attentive observation of facts would avail little without the power of the senses, or some of them at least, to give precision to the measurement of observations. A blind people could have only an imperfect idea of law, for outside of numerical speculations, of what phenomena could it form a conception even but slightly exact? If we have been able to give a certain precision to the study of laws, the fact is due principally to the sense of sight All the phenomena that the less perfect senses appreciate with difficulty have been converted little by little into visual phenomena; and in this new form their slightest variations have been followed with strict exactitude."

"Contemplation, then, collects and measures materials. It is for induction and deduction to relate them and make them serviceable. Like contemplation, these faculties must be sufficiently stable and precise; but once they are so, it is to them that belongs the capital share in the creation of laws. Induction, grouping phenomena and making comparisons, brings into relief their points of similarity or dissimilarity; it forms genera, species, varieties; it reveals constancy and uniformity. Acting alone, it results in the formation of laws of similitude; combined with deduction, it constructs laws of succession. Deduction, finally, working upon the results of induction, draws consequences from them; its principal rôle is to coördinate the laws of succession."

"So much for the subjective conditions; the objective conditions are not less necessary."

"The most marked analogical disposition and the most brilliant faculties of induction and deduction would have availed nothing for the discovery of any law if, in a certain measure, the exterior world had not lent itself to our investigations."

"In the first place, needless to say, if the *milieu* had not, in some degree, been governed by laws, they would have been sought for in vain. Further, and the point should be emphasized, these laws must have been sufficiently simple to be accessible to the means of investigation possessed by man. Above all, if a certain harmony had not existed between the complication of the world and the energy of our cerebral ap-

Are there "laws" in things?

titudes, man could only have remained in a lethargic stupidity before the millions of facts that would have assailed his senses. If the world be supposed more complicated than it is; or, what comes to the same thing, if it be supposed that, the faculties of the brain remaining what they are, the senses which furnish the former their materials were more perfect and more capable of revealing to the understanding a mass of details not now perceived by the mediocre senses we actually possess, it is more than probable that we should be unable to see any order in nature. Our contemplation would never have been sufficiently energetic to resist the tumultuous assault of phenomena, and in this disorderly invasion of materials of all kinds, the inductive and the deductive faculties, unskilled in selection, would be incapable of forming relationships, of making logical connections, of deducing consequences, and, consequently, of finding laws."

"Hence the possibility of finding laws and so of arriving at the notion of Law depends upon a certain state of equilibrium between the senses which furnish and conserve materials and the faculties which utilize them. Had the world been more complicated or our senses more perfect, our over-burdened reason would have been practically annihilated."

"This statement is so true that the first effect produced upon the brain of man by the spectacle of natural phenomena was only an immense bewilderment and many centuries passed before this spectacle revealed anything but an infinite variability. Only little by little were relations discovered and resemblances recognized; and even then the result would have been miserable failure if the most complicated had been attacked first, instead of the clearest, the simplest, and the most precise. Had all phenomena been as complicated as those of life or society, the genius of man would never even have tried the adventure! It is only because he long bent over the study of numbers and of lines,[1] that he was then able to rise to the conception of social and individual existence and penetrate the mysteries of the human heart."

"A special disposition of our mind,—the analogical disposition,—a certain number of intellectual faculties capable of stability and precision; a world governed by laws, and they sufficiently simple; finally a certain proportion between the intellect and the senses: here are already many conditions, objective and subjective, for the rise of the notion of Law."

"Yet even these are not all; they would have been of no avail all together if above man had not been Humanity. Individual men have been able to discover laws; Humanity alone has been able to originate the notion of Law. In other words, the idea of law did not suddenly arise in the brain of some individual man; it ripened little by little, was slowly elaborated in the minds of all men or, more exactly, in the brains of the few hundred of superior men who have made science. Some were able to contribute more than others, but all have contributed to the result to some extent."[1]

---

[1] "It is by the theories of geometry and mechanics that the fundamental science is connected with the science that follows it. But its own development depends primarily upon numerical speculations, the only ones sufficiently simple to make possible the spontaneous rise of their abstract culture."

"More universal and more independent than all others, the ideas of number will always offer to the individual as well as to the species, the first domain of positive rationality. . . . The extreme ease with which deductions are therein made constitutes it the natural source of positive logic." POL. POS., I, pp. 463-464; Eng. tr., I, pp. 376-377.

Here, then, is the place to review this achievement of all Humanity which, on the basis of the empirical data gathered by popular good sense, enabled its choicer representatives to rise to the level of a systematic conception of Science and Law.

Thales marks the beginning of all scientific progress in the abstract sense of the word. Yet his importance should not be exaggerated. His works are based upon the accumulated results of centuries of effort on the part of numberless humble investigators, whose names even will forever remain unknown. These pioneers, these first observers of the phenomena of number and extension have every right to our grateful recognition, for it is upon the foundations that they prepared that the entire construction of later centuries has been built. How could a civilized world exist without mathematics? Yet the very basis of this branch of knowledge, those so-called axioms on which depend calculus and geometry,—what are they but inductions from experience in the practice of calculation and measurement on the part of the higher animals as well as man? Thales, then, owes his importance only to the fact that he determined once for all the laws underlying the experiences and observations accumulated throughout earlier centuries. Once this determination of the laws governing empirical truths had been made, he was able to rise to a higher degree of human knowledge: the abstract knowledge of abstract relations. At the beginning, this knowledge was limited to the phenomena of number and extension, but it soon came to include the manifestations of movement. Whence the constitution, once these three classes of laws had been established, of calculus, geometry, and mechanics, three sciences grouped together under the name of mathematics. Thereafter a solid foundation existed on which could be erected little by little the encyclopedia of the sciences.

Of this fundamental science of mathematics, but one remark need be made,—a remark, however, of incontestable importance: by virtue of the simple nature of the phenomena with which it deals, it is essentially a deductive science. Its fundamental inductions are so few, they impose themselves upon the mind with such force, that it is easy to understand how they could, for so long, have been considered as in some mysterious way innate in the human mind.[2] In reality the few indispensable postulates of this science are the products of induction in the simplest possible cases, and once these inductions are made and formu-

---

[1] Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, pp. 183-189, *passim.*

[2] "Numerical phenomena, by virtue of their supreme simplicity, are the only ones in which general facts become appreciable inductively without requiring any deductive indications emanating from less special speculations." POL. POS., III, p. 128; Eng. tr., III, p. 106.

Astron–

lated, the remainder of mathematics is only a series of logical deductions. The method of mathematics, consequently, differs considerably from the methods employed by the other sciences. Everywhere else, in fact, deduction yields to induction. The three branches of mathematics are the natural field for the exercise of the deductive method.[1] Hence, among all the sciences, mathematics has so great value for education, for the training and disciplining of the intellect. Despite the diversity of the phenomena it studies, it retains an essential unity; and Comte grasped the significance of the fact when he gave mathematics the first place in education, when he extolled it as the most efficacious of disciplines, and gave it the name of "Positive Logic."[2]

Once mathematics had been systematized, the rise of astronomy, in so far as its numerical and geometrical aspects are concerned, quickly followed. The conception arose of a sequence, a continuity, in the development of the sciences. This conception, however, remained implicit for centuries. The cause of this long delay is easy to explain. Science, had, in fact, reached the point at which it had to deal with a different category of phenomena: those which are presented by the external world. It had now to operate a new analysis which should be related with and correspond to that which had already been made in the domain of mathematics. This analysis had to deal with the myriads of different phenomena presented by the whole physical environment. The works of Aristotle reveal the immensity of the task; and it was Aristotle, in fact, who first undertook this new enterprise.

The work of Aristotle embraces in truth the totality of human concern. Far from being limited to the study of the phenomena of the material world, it includes also that of the domain of moral phenomena. Nevertheless, the principal interest in Aristotle's efforts, from the scientific point of view, is undoubtedly to be found in his Physics.[3] In his language, Physics, Τὰ Φυσικά, i e., "the things of nature," had a wide meaning and signified the sum total of the phenomena presented by the world without, including the animal kingdom. His investigations into "the things of nature" form a mass of concrete data that are now ranged under the sciences of physics, chemistry, botany, zoology, and other sciences, abstract and concrete.

The Greeks, clearly, did little more for the solution of the general problem of scientific analysis and delimitation than establish mathematics as an abstract science. Despite his immense genius, despite the astonishing previsions to be found in his work, Aristotle could do no more than bequeath to after generations data for the solution of the new problem; namely, the establishing of specific classes among the masses of phenomena included under the too general name of Physics. For social reasons,—reasons which have nothing to do with the nature of the physical sciences,—this problem of classification was not attacked until the beginning of the modern era.[1]

---

[1] "As regards deductive logic, its principal seat is necessarily the science of mathematics, which fully elaborates all its characteristic processes. Their natural uniformity prevents the higher sciences from taking any other share in the development of deductive logic than that of showing how the difficulty of making deductions increases in proportion as speculations become more complicated. But in these higher sciences, the course and manner of deduction remain the same, since they depend solely upon our intellect and in no wise upon the objects of our continuous meditation, whatever they may be." POL. POS., I, p. 536; Eng. tr., I, p. 434.

[2] POL. POS., IV, pp. 200-208; Eng. tr., IV, pp. 176-184.

[3] This term is used here in the most general sense. No allusion is intended to any one of Aristotle's works.

Even when modern science began this analysis, its efforts were handicapped by a fact worthy a moment's attention. This fact was the following: astronomy, then still in the form of astrology, had by degrees become intimately related with chemistry, then still in the form of alchemy. These two sciences are in fact the second and the fourth in the scale of the abstract sciences; and the intimate relations established between the two long made it difficult for men to understand that a third science separated them: physics, that is, in the modern sense of the word. Before the work of analysis could be advanced, astronomy had therefore to be separated from chemistry. For this forward step to be taken, astronomy had to be reduced to a state of entire positivity,—an achievement that was impossible until mechanics had reached a higher level of science than that to which the Greeks had been able to raise it.

Thus the further analysis of phenomena depended, in the modern period, upon the perfection of the third and last branch of mathematics. Once this step in advance had been taken, the others followed regularly. First astronomy, then physics in the proper sense, then chemistry became positive at shorter and shorter intervals. The result was that by about the end of the eighteenth century two of the great divisions of science,—namely, Mathematics (Logic, in Comte's terms), and Physics (in Aristotle's sense),—had been analyzed into their constituent elements. The positive hierarchy thereafter consisted of four sciences: mathematics, astronomy, physics proper, and chemistry.

At this point in the evolution of science, the analysis in progress was found to be once more in a critical situation. From the world of inert matter, it was necessary to pass to the world of life. All the phenomena that Aristotle had ranged under the name of Physics had been classified and reduced to law with the exception of those presented by living organisms,—an important omission. Mathematics and Physics had become positive; it was now the turn of the science of life.

---

[1] It was no inexplicable diminution of theoretical capacity that determined the arrest in the evolution of science referred to in the text. "The construction of the Catholic dogma required intellectual efforts quite as considerable as those demanded for the most transcendant scientific elaborations. Each of the great doctors of Catholicism would have been an eminent constructor of the positive doctrine, if social conditions had at the time directed their powerful intellects toward the culture of special science. The truth is that the intellect never functions except under the stimulation of the heart: the latter puts problems and lends to the intellect an energy that the latter does not possess of itself. Man always thinks either under the urge of cupidity, pride, vanity, etc., or under the stimulus of love, according to his moral elevation. And as, in general, great intellects are united with great hearts, it follows that decisive elaborations are accomplished only when social needs cause superior souls to converge upon them." Mendes, LA PHILOSOPHIE CHIMIQUE D'APRÈS AUGUSTE COMTE, pp. 58-59.

Just as the Greeks had as their historic task in the development of science to constitute mathematics; just as the great contribution of modern times had been the positive organization of Physics; so the solution of the third and last problem of Science, i. e. the reduction to positivity of the study of vital phenomena, fell to the lot of the nineteenth century.

Hitherto, no special term[1] has been suggested for this new mass of phenomena to be reduced to law. After Logic, in Comte's sense, and Physics, in Aristotle's, what term should be chosen to mark the nature of this third group of facts to be studied? It is not difficult to make a choice: the new group comprises all the phenomena of life. Now life is in its most complete manifestation, in its highest and most comprehensive form is the soul, understood not in the theological or metaphysical meaning usually attributed to it, but in the positive sense. By analogy, then, with the Τὰ Φυσικά of Aristotle, the expression Τὰ Ψυχικά may be adopted. Physics dealt with the material world; Psychics[2] will have as its domain the phenomena of the world of life, which it will study in all its manifestations whatever.

The use of the new term makes it possible to present the result of the preceding discussion as follows: Science comprises three main groups: Logic, or Mathematics, Physics, and Psychics. The first group is composed of calculus, geometry, and mechanics, studying respectively the phenomena of number, extension, and movement. The second group is subdivided into three specific elements: astronomy, which studies the earth as a heavenly body in the light of the laws of geometry and mechanics; physics proper, studying the universal attributes of matter; and finally chemistry, which deals with the general laws of the combinations of matter in the light of the specific qualities of the different substances.[3] All these sciences, the object of which is the discovery of the laws governing the phenomena of the non-living world, were constituted at the time of the French Revolution. It remained and it remains to carry out the analysis of Psychics, the general science of life, in its widest and deepest extension.

NB

The analysis of this last group of phenomena is complicated by the fact that it is possible to envisage them from two points of view. The origin of the resulting confusion is to be found in Aristotle. In his work, animal life is included in the number of "natural things." To the study of these natural phenomena,—including the organic life of animals,—was later given the name of 'natural philosophy.' Above 'natural philosophy' was placed 'moral philosophy,' the object of which was the study of the highest manifestations of human life,—a domain into which science has only recently penetrated.

---

[1] Comte, in the last period of his life, grouped biology, sociology, and morals together under the general term of morals.

[2] Hitherto the term psychical has been limited to intellectual and moral phenomena; it is here purposely extended to biological phenomena in order to emphasize the fact that the manifestations of the mind are inseparably connected with those of the body.

[3] Pol. Pos., IV, p. 183; Eng. tr., IV, p. 162.

The distinction between these two 'philosophies' is evidently based upon the belief that the phenomena of organic life have no relation to those of the moral life. No attempt will be made here to refute this implication, which is the historical product of the centuries in which science dealt only with the lower categories of abstract phenomena. Suffice it to say that the distinction between 'natural philosophy' and 'moral philosophy' disappears of itself the moment that the study of the facts of moral life shows it to be unjustified. The study of the phenomena of organic life will then cease to be considered as the culminating point of science, and will serve as an introduction to the study of moral phenomena, hitherto neglected. And from the moment that the age-old belief which separates 'natural philosophy' from 'moral philosophy' disappears, a scientific distinction is imperatively demanded between Physics and Psychics.

The existence of the two points of view just referred to explains how two different methods could have been employed in the study of the phenomena comprised in Psychics. One consists in regarding these facts from the point of view of natural philosophy; the other in considering them as material for new abstractions. The first is concerned especially with the study of living beings; the second with the analysis of the phenomena of life. The first is the logical result of the historical development of science, century by century; the second can be understood only in the light of Science, in the abstract sense of the word.

The first method, which makes the study of all living beings a single science placed at the summit of natural philosophy, has almost always been employed. With the exception of a single group of scientists, the biology of the last century was a branch of natural philosophy.[1] Consequently this science, called "the science of life," strove to subject to its methods of investigation all the observable manifestations of life, and assumed that no phenomenon presented by a living being was outside its domain. Such a pretention on the part of biology signifies that it arrogates to itself the right to reign over all the phenomena which in the scientific hierarchy are above those studied by chemistry. According to this view, the encyclopedia of the sciences is composed of but five members of which biology is the highest. In other words, biology and Psychics are one.

It need not be said that if this claim to supremacy is justified, the effort to constitute other sciences of a higher rank is devoid of meaning and utility. But it is evident also that if the vanity of the claim of biology to such scientific hegemony is demonstrated, then the biology which developed out of natural philosophy will no longer appear as an abstract science treating irreducible and specific phenomena but as a concrete science dealing with composite phenomena.

---

[1] Bichat, Blainville, Broussais,—after these men, *facil[illegible] descensus Darwino.* "Disdaining all anterior labors, an empirical pride caused the birth of sound biology to be dated from the very time of its degradation." POL. POS., I, p. 570; Eng. tr., I, p. 461.

The biology of today, the biology which studies all the manifestations of living beings,[1]—can it rightly, yes or no, claim for itself the highest place in the hierarchy of the sciences? An answer to this question is imperatively demanded; without a decision in the matter, the remainder of this volume would be impossible.

The pretentions of the biology just defined, the all-inclusive biology developed out of natural philosophy, cannot be sustained.

There are phenomena it cannot study: they will be clearly indicated in the course of this volume. For the moment, the highest place in the hierarchy can be refused to biology on the ground that it fails totally to observe the fundamental distinction so exhaustively drawn in the second chapter of this volume. The abstract sciences study events, properties, attributes; the concrete sciences objects, things, beings, combinations of properties, syntheses. Now biology has remained up to the present time the study of beings, of living beings, of the multiple manifestations of life in the widest sense. Such is the domain of the biology which is the culminating point of natural philosophy. From

---

[1] "The term 'biology' has of itself no truly precise meaning and can have none . . . Everything concerning a plant or an animal belongs more or less to the domain of biology, and so it is easy to perceive the extension this domain is capable of; it includes linguistics as well as sociology." Rabaud, ÉLÉMENTS DE LA BIOLOGIE GÉNÉRALE, p. 1. Alcan, Paris.

It is high time that this 'science,'—which can not even define its own domain,—should be made to content itself with the place here appropriated to it in the scientific hierarchy. It is time, too, that it should leave to history its pretentious schemes of 'evolution,' so harmful from the social point of view, and as devoid of objective basis as the strikingly similar schemes that arose among the Greeks at the beginning of the analysis of Physics.

And it should be recognized that the volume of Rabaud aids greatly in furthering this result. Note, first, p. 37: "Living substances have been multiple and diverse from the very moment of their birth. . . . From the beginning, distinct organisms must have existed, species characterized by their physico-chemical constitution, by the number and qualities of the constituent substances." And next, p. 418: "Our conception of progress is strictly anthropomorphic; we never judge the value of a form in an objective manner; we have no other criteria than the degree of complication that results from a specialization, and this criterion is not sufficient, for nothing proves that a complication or a specialization is an improvement; the contrary even could easily be proved. And as for the arrangement in a series, we have now no doubt as to its mediocre value, since we know that from the same pair may be born individuals forming a gradual series between two extremes."

Now in 1851 Comte was saying: "Debates without issue will be raised just as long as this construction [the animal series] is represented as an absolute expression of external reality, instead of seeing in it above all a subjective foundation, destined for the logical perfecting of high speculations on life." POL. POS., I, p. 656; Eng. tr., I, p. 530. His prediction has been amply verified.

Biology

this point of view, there can be no argument: this type of biology is obviously a concrete science, and consequently the pretentions of this science to control over all the manifestations of life, and especially over the highest of these phenomena, rest upon a fundamental error of logic.

This error, which gives to biology, defined as the science of living beings, the place which is due only to biology defined as the science of vital phenomena, has thrown confusion into the whole domain of Psychics. Biology, historical outcome of natural philosophy, has, for two generations, usurped, despite its clearly concrete character, the place of an abstract science It is this usurpation, resulting directly from an error of analysis, which handicaps all study of psychical phenomena. Before order can be established in the final section of the scientific encyclopedia, the proper nature of biological investigation must be understood and defined, the composite phenomena that it deals with must be analyzed and reduced to their specific classes. In short, a return must be made to the period when the analysis of Physics had just been completed, and another route than that already followed must be taken by scientific inquirers. For this end, there is but one method, a method that has already demonstrated its value. It will indicate the route to be followed. It points out clearly that what must be done is to continue the process of discovering new specific classes of phenomena. In this way, and in this way only, will be found the complete solution of the great problem of Science.

On this new path, much ground has already been covered. The world of Psychics has already been divided into its constituent domains. The achievement is due to Comte and those who facilitated his labors. At the beginning of the nineteenth century, the task was commenced by those who represent the second point of view from which biology can be envisaged, i. e. the search for the abstract basis of the phenomena of life and its reduction to law. The work of Bichat is the best example of this new tendency. Bichat strove to determine, in his studies of the phenomena manifested by living beings, the abstract nature of life. His efforts were resumed, corrected, completed, and given precision by Blainville. These results were subjected to a thorough philosophical examination by Comte.

In none of their attempts did these savants seek to group together all the phenomena above those studied by chemistry. They limited their efforts to finding a general definition of life in the light of its manifestations in living beings. They endeavored, in short, to do nothing but establish a criterion which would allow of the establishment of a new specific class of abstract phenomena.[1]

---

[1] "In order to distinguish chemical activity from biological existence, it is necessary first to note that the latter always assumes a coöperation of solids and fluids. Besides, when the chemical reaction is once effected, the bodies that result from it tend to keep the same so long as the circumstances remain the same. But, in the vital phenomenon, in addition to the physico-chemical manifestations, there is also a double movement, more or less rapid but always necessarily continuous, of composition and decomposition, indispensable to the conservation of the structure of the

Far from signifying that living beings manifested only a single abstract class of phenomena, this new definition implied on the contrary the existence of other abstract classes. In fact, it showed clearly that Psychics is composed of several different classes of phenomena, and it sought to define but one of them. This new definition implied that the word *life* designated not an irreducible but a composite phenomenon, and that the vital element is only one of the elements of which it is composed. The conception developed of a biology limited to a particular group of specific manifestations. Psychics, in consequence, began to appear as divisible as Physics had been found to be.

The vital element, then, is only one among others. Comte quickly understood the significance of the fact, and at once attacked the problem raised by implication from the work of Bichat and Blainville; that is, he undertook to do for the phenomena above the vital what had already been done for the phenomena comprised in the lower sciences of the hierarchy. The immediate result was to raise from five to six the number of abstract sciences. The new phenomena were undoubtedly the essential elements in the social life of man. Comte, consequently, divided Psychics into two abstract groups dealing respectively with life and society. The hierarchy thereafter extended from mathematics to social physics, its culminating point. In other words, Comte was asserting at this period of his development that Psychics included two and only two elements: the vital and the social.

Yet when Comte made social science the final term in the encyclopedia of the sciences, he was guilty of an error analogous to that which had been committed when the entire domain of Psychics had been assigned to biology.

Biology had assumed the homogeneity and indivisibility of the phenomena of life, whence its pretensions to the highest place in the scale of the sciences. When Comte gave this place to social physics, he assumed, in his turn, the irreducibility of the phenomena denoted by the term social. But was his assumption justified? Is it not possible to carry the analysis still further, to divide social physics into specific elements? If this possibility exists, then social physics is dethroned just as biology has been; it loses the supremacy granted it as an abstract science; and because the phenomena with which it deals are in reality composite and not abstract, it ceases to be an abstract science at all and takes its place among the concrete sciences.

Precisely this discovery was the result of the entire philosophical career of Auguste Comte. He reached it after thirty years of study. *At the end of this time, he found the nature of his initial error. And he avows this error in a passage that will be quoted in the course of this*

---

body, by causing variations in the substance of the latter. Finally, by an appropriate arrangement of the circumstances, we shall always be able, whatever the bodies concerned, to produce purely chemical phenomena, i. e. a composition or a decomposition. But this instability that constitutes life is found realized only in certain substances, organized in a certain manner, during a certain time, and placed in a milieu of a permanent nature." Mendes, LA PHILOSOPHIE CHIMIQUE D'APRÈS AUGUSTE COMTE, pp. 52-53.

volume,—a passage that seems never to have received the attention it deserves. In brief, Comte discovered that social phenomena do not form an irreducible group, but that they can be divided into collective facts and individual facts.[1] In consequence, Psychics is finally found to be composed of three classes of facts instead of two: the class of vital phenomena, that of societal or collective phenomena, and that of individual phenomena. The hierarchy of the sciences thus consists of seven sciences, comprising, above chemistry: biology, the science of life in the abstract sense; sociology proper, i. e. *the science of societal phenomena,* and morals, the science of individual phenomena. With the last of these sciences, scientific analysis seems to have exhausted its possibilities, for here man, having traversed the whole of the exterior and 'material' world, reaches at last the highest phenomena of the interior and 'spiritual' world.

NB

From this analysis, then, comes the definitive result that Psychics, after Logic or Mathematics and Physics, is analyzed and constituted, and that the general problem of Science is solved in its main lines.

This final achievement was necessary if the notion of Law was to acquire its full power. So long as a single order of facts remained outside the control of science, the empire of Law over the other orders was precarious. The arbitrariness and uncertainty to be observed among the superior sciences of the hierarchy inevitably weakened the authority of law over the inferior sciences. Why should there be constancy, order, immutability on the one side when on the other there were only disorder and mutability? Comte's discovery put an end to all hesitation. Henceforward, the world, in all its manifestations, is subjected to immutable laws, revealing themselves in the manifestations of individuals as well as in the phenomena of numbers.

Henceforward also the conception of independent laws governing autonomous groups of phenomena will disappear with the spread of the conception of Law, controlling phenomena as a whole. Above what might be called the scientific feudalism of other days, above the petty fiefs and independent domains in which were confined the different branches of human knowledge, today arises, in all its grandeur, the sovereign idea of Science, abstract and universal.

Guided by the history of the development of science, men of today are enabled to rise above their conception of independent scientific specialties and attain to that of the homogeneous whole that constitutes Science. In the light of this new conception, they now see the enchainment that in fact existed between the efforts of all those who contributed in the past to the development of science, including those who, absorbed in their efforts to obtain immediate results, were far from suspecting the value of their contributions. The very evolution of Science clearly shows that all the savants and investigators of the past were attacking but a single problem: the detection of Law in the complexity of phenomena.

---

[1] To mark this distinction clearly, as well as to have a word corresponding to 'vital' and 'moral,' the word 'societal' of Sumner has been employed. Henceforward, then, the word 'social' will disappear from these pages, except in the cases where its use will be necessary to denote composite phenomena, combinations of societal and moral facts, of collective and individual facts.

This problem the first explorers of the domain of science were totally incapable of perceiving. Each one worked in his own way, pursuing his own purposes; nevertheless each without knowing it played his part in the solution of the general problem. They were all in the situation of students to whom had been given a complicated algebraical expression without any directions for dealing with it. Their first efforts would be very hesitant; but presently, by applying various expedients, they discover that a single factor can be set aside from the expression, which is thus simplified. A second factor, then a third, is discovered and set aside. The remaining factors are more and more easy to isolate, and at last the nature of the problem is clear. The solution of the problem evidently calls for the finding and isolating of each of the factors of which the expression is composed. Thus the uncertain casting about that marked the beginning of the solution is transformed into a rational and systematic method, and the final operations are performed with full consciousness of the end to be attained.

In the same way, the immense problem of science became more and more comprehensible. In the presence of the immeasurable mass of tangled phenomena, men began to deal in a systematic and logical way with the simplest facts available to their reason. The results obtained were mathematical in their nature; they sprang from the observation of the phenomena of number, extension, and movement. The mathematical group once isolated from the others, the data special to astronomy were next set aside, the remaining mass thus becoming less unwieldy. The constitution of the physical group was thus facilitated, and so on. Finally, by the time the biological factor was reached and set aside, the nature of the general problem had become evident. The scientific spirit, eager for knowledge, understood that it had to perform an immense classification, to untangle a formless mass of intellectual threads, to assign to clearly delimited categories the totality of observable phenomena.

When the nature of the problem was once discovered, the method of solution changed. Methodical, rational, general effort took the place of empirical and limited trials. The doubtful and difficult classifications of former generations gave way to the conscious division of abstract phenomena into distinct classes. Finally the understanding of the task to be accomplished reached the degree of precision at which it was possible for a single individual to perceive the final result of the analysis begun by the first investigators into the phenomena of numbers. To crown the efforts of all the centuries, to delimit and to classify all the phenomena not yet disengaged from the original mass, needed but the coming of a man of genius. This man was Auguste Comte. To him Humanity owes the completion of the gigantic analysis.

1
2
3

In the immense evolution of Science just sketched in the light of the nature of scientific Law, there were three decisive steps corresponding to the three great divisions of Science. In Logic, i. e. mathematics, the decisive step was the institution of geometry; in Physics, the institution of physics proper; in Psychics, that of sociology. In fact, the entire development of the scientific hierarchy can be summed up in the successive advent of these three sciences, for each holds a special place in each of the three main groups of the encyclopedia. Geometry, physics, sociology,—each is a middle term between two extremes. Consequently, the delimitation of these mean terms is at once the cause and the result of the delimitation of the two extreme terms that they both separate and unite. For the same reason the complete analysis of the three great divisions of Science depends upon the exact delimitation of their three middle terms.

It is in the domain of Psychics above all that can be remarked the great importance of the middle term, i. e. sociology. The clear determination of the limits of biology and of morals can be obtained only by a precise and simple delimitation of the domain of sociology. Hence the extreme importance of sociology as regards the final solution of the great problem of Science.

It was Comte who first succeeded in making this delimitation. The next chapter is therefore concerned with the evolution of his thought and the re-tracing of the path which conducted him to this end.

1 - Vital Biology
2 - Societal - Sociology
Individ - Morals -

This chapter traces the evolution of Comte's conceptions of sociology from his first to his last works. From volume to volume, from page to page, and in certain cases from line to line, his development, for the first time, is followed.

The analysis begins with his early essays and proceeds to the *Positive Philosophy*. This part of Comte's writings is better known than the rest, and the task is relatively easy. Here are to be found the hierarchy of the sciences and the principles upon which it is based. Here too are contained the error in analysis of phenomena and the failure rigidly to apply his own principles that Comte was to spend twenty-five years in discovering and redeeming.

The bringing of this error to light is the main function of this chapter. The first hint is to be found in the *Social Statics*, where it becomes more and more evident. The second stage is in the *Social Dynamics*, where it is at last obvious but where the correction is incomplete. The next stage is in the third chapter of the fourth volume of the *Positive Politics*. Here the essential corrections have been made, but their final implications remain unseen. Further analysis is called for but seems blocked by Comte's death. Only the outline plan for another volume survived him. The details of this plan seem to conflict with the conceptions so slowly matured. The fact at first sight is disconcerting. Nevertheless it actually serves, when properly understood, to guide the inquirer to his ultimate goal. To conduct him thither is the object of the fifth chapter.

The whole episode is a most curious one, for it brings into relief the almost complete neglect into which a full half of Comte's work has been allowed to fall,—a neglect that is not creditable to scholarship, for even if half the work of a great thinker could be entirely valueless from the point of view of theory, the record it preserves of a powerfully original genius writhing in the bonds of contemporaneous theory and struggling to free himself from them is one of the most absorbing intellectual histories it is possible to study.

CHAPTER IV.

From Social Physics to Sociology "Properly So Called"

THE analysis of Psychics and the determination of its elements is the task imposed upon contemporary science by the very force of scientific evolution. The achievement of this analysis depends, as has been seen, upon an exact delimitation of the middle term of the third division of the hierarchy, consisting of biology, sociology, and morals. Since sociology is the mean term of this progression, every change made in its definition will imply and require a corresponding change in the content of the other two members of the group. In the same way, every change in them will necessitate a modification of the meaning of sociology. It is precisely this fact that, once understood, affords the key to the complex development of the thought of Comte, of the development of which the principal phases are to be summarized in this chapter.

Starting with the idea that sociology was the final science in the hierarchy, Comte was led by degrees to the conclusion that it was in reality only an intermediate term, that there was a science above it in the hierarchy. Thus his analysis of Psychics came to consist of three elements intimately related. Every modification in his conceptions of one of these sciences brought with it a change in his conceptions of the others. Such was the progress of his thought, resulting in one modification after the other, until the three constituent elements of Psychics were at last delimited once for all.

Already in 1822, dominated by his propensity for the study of social questions, Comte had shown the necessity of a mental reorganization of the Occident as a preliminary condition of its political regeneration. In his thought such a reorganization could result only from a "new organic doctrine," the central element of which was to be politics transformed into a positive science. In order to point out the path that had to be followed if politics was to be brought to the level of science, Comte traced the development of the natural sciences. Each of the latter had passed "successively through three different theoretical states: the theological or fictive state; the metaphysical or abstract state; and finally the scientific or positive state." The same evolution, he asserted, would have to be undergone by politics.

Next he explains why politics had not long before reached the rank of science: the evolution of each science is dependent upon the nature of the phenomena dealt with by it. "The sciences have become positive one after the other in the order in which it was natural that this revolution should have been effected. This order is determined by the higher or lower degree of complication of their phenomena, or in other terms by their more or less intimate relation with man. Thus, astronomical phenomena first, as being the simplest, and then in succession physical, chemical, and physiological phenomena, have been reduced to positive theories; the last mentioned ones at a very recent epoch. The same reform could be brought about only in the last place for the phenomena of politics for they are the most complicated, since they depend upon all the others. But obviously it is as necessary that it should come to pass as it was impossible for it to happen sooner."[1]

Thus there was already in the thought of Comte, then twenty-four years of age, the conception of a hierarchy of the sciences, each member of which was logically interlinked with that which followed it.[2] In 1825, he returned to this early conception of a hierarchy and his meditations on the subject ultimately led him to the construction of his *Positive Philosophy*. In the essay of 1825, he studied particularly the nature and the order of development of the various sciences already positive. His conclusions are the following:

"After having thus determined the point that has today been reached in the formation of the positive philosophy, it is necessary to ascertain what yet remains to be done in order to complete it.

"The natural series of phenomena furnishes of itself, so to speak, the reply to this question. The four great classes of observations established in the past do not, at least explicitly, comprise all the points of view from which existing beings can be considered. There is evidently lacking the social point of view for those beings, man above all, who may thus be regarded; but it is equally evident that this omission is the only one. Thus we now possess a celestial physics, a terrestrial physics, mechanical and chemical, a vegetal physics, and an animal physics; we NB lack a last one, social physics, for the system of our knowledge of nature to be complete. This condition once met, we shall be able, by a general summary of all our various notions, to construct a true positive philosophy, capable of satisfying all the real needs of our intelligence."[3]

In order to reorganize the entire social system, there was needed, then, the formation of an intellectual system appropriate to the new state of the human mind. In order to complete the formation, already well advanced, of such an intellectual system, political science had to be made positive. Obviously, so important a task and so difficult a task could be accomplished only in the light of a preliminary study of the methods and domains of the sciences already positive. This necessity of a preliminary study Comte felt fully; and he set himself to the work in 1830.

---

[1] Pos. Pol., IV, app. pp. 47-137; Eng. tr., IV, pp. 527-589. *Plan des travaux scientifiques nécessaries pour réorganiser la société.* See particularly pp. 77-81; Early Essays, etc., pp. 82-217.

[2] This early conception of a scientific hierarchy of four terms was of course familiar to the Encyclopedists, from whom Comte obtained it. See, for example, D'Alembert's Discours Préliminaire de l'Encyclopédie.

[3] Pol. Pos., IV, app. pp. 137-176; Eng. tr., IV, pp. 590-617. *Considérations philosophiques sur les Sciences et les Savants.* See especially pp. 149-150. Early Essays, etc., pp. 218-275.

The result was the *Positive Philosophy*, written from 1830-1842. The general exposition which opens the first volume of this famous work is composed of two chapters which lay the philosophical bases on which the remaining chapters rest. Of these two chapters, the first gives precision to the conception of a positive philosophy; the second deals with the question of a classification of the sciences, i. e. the construction of a scientific hierarchy. This second chapter emphasizes the abstract nature of the sciences of which this hierarchy is to be composed. Here is to be found the distinction between abstract sciences and concrete sciences developed at length in the second chapter of this study. Then, in the same chapter, Comte attacks the problem of the hierarchy. His logical method for constructing it is the method of binary decomposition. Applying this method to the entire sum of phenomena, Comte established a fundamental division between inorganic physics and organic physics. Inorganic physics is divided into celestial physics, or astronomy, and terrestrial physics, which in turn is divided into physics proper, and chemistry. Organic physics comprises two sections; i. e. two orders of phenomena: those which relate to individuals and those which relate to the species, especially when it is sociable: whence physiology and social physics. At the basis of all these sciences lies mathematics.

Thus the hierarchy is composed of six members: mathematics, astronomy, physics, chemistry, physiology, and social physics. In 1838 only did Comte make use of the term 'biology' to denote the phenomena of vitality, and only in 1839 did he construct the word 'sociology' to replace the expression 'social physics.'

In the light of this delimitation of the domains of the sciences found in the second chapter of the *Positive Philosophy*, it is evident that social physics embraces all phenomena above those contained in the domain of biology. In the light of the same distinctions, it is clear that the last three volumes of the *Positive Philosophy* deal with all the organic phenomena not included in the volume on biology. In general terms these four volumes as a whole are devoted to the phenomena of vegetality, animality, and sociality. The study of sociality is the business of social physics, the final science in the hierarchy. The study of animality, the higher section of biology, serves as an introduction to the final science, social physics. The study of animality, in turn, rests upon that of vegetality, the basis of biology.

Such are the divisions of the domain of Science as they are given in the *Positive Philosophy*. Logic is divided into its three constituent sciences; the same with Physics; but Psychics has only two sciences: physiology and social physics. These conceptions were in no way altered when the terms 'physiology' and 'social physics' were replaced by the words 'biology' and 'sociology.' The point has a special importance; it is worthy of attention because it aids to emphasize the fact that Comte, at the beginning of his *Positive Politics*, was constructing it upon the very same philosophical bases, upon scientific definitions and delimitations identical with those of his *Positive Philosophy*. The fact has never been questioned; hence there is no reason for buttressing it with numerous citations; but it has an incontestable importance for this study, which is based throughout upon the evolution of the thought of Comte from one end to the other of the *Positive Politics.*

This point of departure should be clearly marked. "Finally the whole of the positive philosophy must be conceived of as constituting a systematic progression, beginning with cosmology, advancing by way of biology, and ending with sociology." [1] These words, taken from the very end of the first volume of the *Positive Politics*, find a commentary in the first pages of the same volume: "Before beginning the final science [sociology] it is necessary to have sketched the abstract theory of the exterior world and that of individual life." [2] In other terms,—and here begins the principal thought, the essential thesis of this chapter,—for the Comte of the *Positive Philosophy*, of the *General View of Positivism*, of the Fundamental Introduction of the *Positive Politics*,—that is to say, for the Comte of the entire *Positive Philosophy* and of the first volume of the *Positive Politics*,—a knowledge of the individual in all his manifestations, organic and animal, including the study of the intellectual and moral, i. e. cerebral, functions, the theory of the highest vital functions,—and all that is to be found in biology,—is only an indispensable preliminary for beginning the study of the social phenomena of which sociology is composed.

This distribution of the higher phenomena of the 'psychical' sciences seems incontestable from the logical point of view; nevertheless a reader of the Fundamental Introduction of the *Positive Politics* who has thoroughly comprehended the meaning of the division between abstract and concrete sciences—a reader, consequently, who knows that an abstract science should deal with a single specific and irreducible class of phenomena—will not be slow to find certain difficulties, certain inconsistencies, in this Introduction.

For example, in the third chapter of this Introduction, the chapter devoted to biology, Comte says: "I should not terminate this long chapter without having in it accomplished a more special renovation as regards the positive theory, statical and dynamical, of the interior functions of the brain, which constitute intellectual and moral existence. The scientific need of such a doctrine for the volume to follow would sufficiently justify the special care of which it is here the object . . . The theory I am going to set forth constitutes the proper object of the thirteenth and fourteenth lectures on physiology of the general course of biology, the systematic plan of which I have just explained."[1] But at the beginning and end of the same chapter there are statements that can only with difficulty be reconciled with those just quoted, particularly when it is remembered that an abstract science should deal exclusively with the irreducible phenomena upon which it is based. Note the words here italicized: The real laws of the intellectual and moral functions "can be discovered and established only by sociology," "*which alone is competent for the task.*"[2] Then, "the most direct, the most extensive, the most decisive application of such a biological construction [the theory of human nature] must be found in the *sociology from which it emanates.*"[3]

---

[1] Pol. Pos., I, pp. 735-736; Eng. tr., I, p. 594.

[2] Pol. Pos., I, p. 42; Eng. tr., I, p. 32. These words, written in 1851, are but a repetition of the observation to be found in the essay of 1825: "Social phenomena, being manifested by human beings, are doubtless comprised among the phenomena of physiology. But, although for this reason *social physics must of necessity take its point of departure in individual physiology*, and be kept in continuous relation with it, it should none the less be conceived of and cultivated as an entirely distinct science because of *the progressive influence of human generations one upon the other*"; Pol. Pos., IV, app. p. 150, note; Eng. tr., IV, p. 599.

In the second of the italicized phrases is to be found the origin of Comte's science of sociology; in the first is contained the error that was to cost him thirty years of labor to discover.

Now, is there not reason for asking how an emanation from sociology can rightfully be placed in biology? What then become of the logical conditions that govern the constitution of the hierarchy of the sciences? To say that "the positive theory" "of these eminent attributes," i. e. of the higher cerebral functions, is "indispensable for the volume to follow"[4] does but make the difficulty greater for in this case sociology, the subject of the volume to follow, seems to be constructed upon data for which it itself the foundation. This inconsistency is not to be imputed to words; it is fundamental. It compromises the very bases of the encyclopedia; and Comte, although he did not have a clear idea of its consequences at the moment he was writing the Introduction, did nevertheless ultimately comprehend the significance of the error. Five years of meditation were necessary to enable him to dissipate the contradiction; he had to renew his efforts to reduce biology and sociology to their exact proportions, and to institute, in the end, a new and seventh science in the hierarchy. NB

It is certain, then, that the sociology of the first volume of the *Positive Politics* is identical with the social physics of the *Positive Philosophy*. It is based upon the belief that biology is capable of giving all the information as to the individual that is requisite for the comprehension of society. But in the course of the meditations that prepared the second volume of the *Positive Politics*, the *Social Statics*, a new conception was being formulated in Comte's mind, a conception that was the result of the combination of several elements. In the first place, in the volumes of the *Positive Philosophy* devoted to social physics, Comte had often had occasion to speak of the influence of art in the development of mankind; and this historical examination of art had led him to study feeling in order to determine the source and purpose of poesy, always destined to communicate emotion, and in particular sympathy.[5] In the second place, the first chapter of the *Social Statics* dealt with the positive problem of religion considered as the fundamental bond of the social organism; and the importance of feeling in any study of religion has no need of being emphasized. Again, Comte had discovered that certain phenomena could not be explained by the social laws he had formulated. The reactions of the vegetative viscera upon the cerebral activity are among this number, as well as the resistance frequently offered by individuals to the normal influence of social laws. More, if religion as a social phenomenon influences the individual, the latter, it would seem, belongs to a category of phenomena not included by the sociological. Finally, Comte himself had been stirred to the depths of his individuality by his love for the gracious woman whose name will ever be linked with his.[1]

---

[1] Pol. Pos., I, p. 669; Eng tr., I, p. 541.
[2] Pol. Pos., I, p. 622; Eng. tr., I, p. 503.
[3] Pol. Pos., I, p. 733; Eng. tr., I, p. 592.
[4] Pol. Pos., I, p. 624; Eng. tr., I, p. 505.
[5] La Synthèse subjective, I, p. 44.

All these influences together had the effect of revealing to Comte a grave defect in the analysis which had placed sociology, considered as the science of the social organism, at the head of the hierarchy, above biology, the science of the individual organism. In fact he was beginning to suspect that he had committed some error in classing the facts of individuality among biological phenomena, thereby ranking them below the sociological. But, if such was the case, what was their place in the encyclopedia? Where should go the science that did study them? And, in a word, what was this science?

The discussion of this problem could not be evaded at the very beginning of the *Social Statics.* This volume, in fact, begins with a long chapter devoted to the study of the general nature of religion, or the positive theory of human unity. Comte raises the question of a new class of abstract phenomena in the first part of the chapter, and he expresses his conclusions clearly, although he does not seem to have, at the moment, seen all their consequences.

The question arises in the following way. Struck by the influence of mankind as a whole upon the individual, he writes: "The gradual appreciation of the fundamental order reveals to us a last class of natural laws, more hidden than all others, but concerning us more closely."[2] It is this "us" which is destined to become more and more the center of his reflections.[3] "Each of us," he says, "feels himself dominated continually by the mathematico-astronomical order, the physico-chemical order, and the vital order. But a more profound appreciation shows a last dominating influence, not less invincible, although more modifiable; the result of all the laws, statical and dynamical, revealed by the social order." "Since civilization has truly appeared, everyone has recognized that his own destiny is materially bound up with that of all his contemporaries, and even of his predecessors." "At a later period, the involuntary comparison of the different social states, simultaneous or successive, makes manifest the intellectual dependence of every man as regards the totality of others." "Finally, even in respect to the most spontaneous of our phenomena, a further examination makes undeniable the constant subordination of our personal feelings to the collective order."[1]

---

[1] For the details of this inner evolution, see especially the work of Mendes, L'ANNÉÉ SANS PAREILLE, Rio de Janeiro, 1918 and also Jane Style, AUGUSTE COMTE, THINKER AND LOVER, Kegan Paul, London, 1928.

[2] POL. POS., II, p. 53; Eng. tr., II, p. 48.

[3] "The phenomena which act upon us may be classed into several groups: physical facts, biological facts, social facts." Achille-Delmas and Boll, LA PERSONNALITÉ HUMAINE, p. 115. Note the use of the word "us."

The result of this growing recognition of the continuous dependence of the individual upon the species has been the final discovery of a new class of phenomena, the social, the laws of which are revealed by sociology. With this science, "the positive dogma at last becomes complete. The individual order is there subordinated to the social order, as the social order is subordinated to the vital order, and the latter to the material order. Since Thales and Pythagoras, an immense philosophical elaboration has never ceased to work at the construction of the systematic notion of the universal order, by extending the first scientific views to phenomena always more complex and special." This long preparation is terminated by the discovery of the principal sociological laws, by which the transition from the world to man is made by means of an immense gradation, starting from the lowest mathematical conceptions and rising to the most sublime moral speculations. The most eminent of the latter, the sociological, constitutes the order "which is the immediate regulator of our destinies. Its consideration, then, should prevail in the systematic appreciation of each human existence," for each individual, although subject to all exterior fatalities, "which can reach the species only by affecting the individual," bears this pressure with the aid of the social order, and is consequently affected by it in an indirect manner only.[2]

The preceding quotations clearly show that Comte is here still thinking of the individual as a biological product; but is more and more feeling how great is the anomaly that consists in considering the individual as the sole element giving rise to the existence of society when the influence of society upon him is so great. Hence the question referred to above, which now takes the following form: How can the "individual" phenomenon be at once cause and consequence of the phenomenon "society"? If the individual order is subordinated to the social order, as the social order is subordinated to the vital order, it seems logical that there should be, above social facts, another class of phenomena. Or else, there is a confusion of thought and the social order is divisible, i. e. this class of phenomena is not specific and irreducible but composite. These are the only possible alternatives. Comte, as will be later seen, ended by adopting the second.

The first clear indication of this new orientation of his thought is found in the following passage: "This indirect transmission would become fully conformable to the fundamental law of natural classification *if the individual order were to be distinguished from the social order proper, i. e. collective, by adding a final degree to the general hierarchy of phenomena.* Although this new degree would differ much less from that which precedes it than in any other case, nevertheless it would follow it as in all the other cases since it is the most particular and most dependent of all. I shall often emphasize how important it is to prolong to its extreme term the immense series which, commencing with the world in its vastest aspect ends with man envisaged in the most precise manner." And he adds: "*This definitive improvement* of my hierarchical encyclopedia" is in perfect harmony with this hierarchy as a whole, each of its orders being "subordinated to that which it follows objectively, and which transmits to it the principal influence of those on which it itself depends." [1]

---

[1] POL. POS., II, pp. 53-54; Eng. tr., II, p. 48.
[2] POL. POS., II, pp. 54-55; Eng. tr., II, p. 49.

It is important to notice, however, that Comte at this very point where he formulates this distinction for the first time does not perceive its profound significance for he continues as follows: "This appreciation, without being further developed, suffices to confirm the final condensation of the positive dogma in its sociological domain." [2] But it must be asked how such a condensation can be justified if there is a real distinction between the individual order and the collective order? If this distinction exists, but two cases can be envisaged: either the positive dogma should be condensed in the domain of individual phenomena, as being the highest and last of all the groups of phenomena and so implying the existence of all the others, or else the study of the social order as the final degree of the hierarchy combines two orders of phenomena, the individual and the collective, and so is not an abstract but a concrete science. And in fact Comte tacitly recognized the validity of this alternative when he later condensed the encyclopedia in the individual domain.

The following point should be emphasized: Comte, at this stage of his evolution, had seen and expressed—in the terms just quoted— the necessity of a division of the social domain. But this idea had come to him in the course of a work that offered him but few opportunities to go deeply into it, in the course of a volume of which the plan had already been carefully elaborated and of which the main ideas had been fully matured. Hence it is that the indications of a new conception of sociology are found only in the pages of the first chapter of the *Social Statics*, and on the margin, so to speak, of the chapter. His new idea, always present in his mind, finds no occasion for treatment in the course of chapters two, three, four, and five. But it reappears in chapter six,[3] and finally, in the seventh and last chapter, it is the object of a thorough discussion, in which it is corrected, made precise, enlarged, and expressed in explicit terms.

The very subject of this seventh chapter made it necessary for Comte to enter upon this discussion. The chapter is entitled: "The Positive Theory of the General Limits of Variation Proper to the Human Order." In it Comte first studies the general aspects of the question and then takes up the special difficulties that it offers. At each step he strikes against the difficulties inherent in the composite nature of social phenomena such as he had hitherto had in mind. Now a discussion of the limits of variation has no meaning when it is abstract phenomena that are in question; it can be applicable only to beings. Comte knew this fact better than anyone else, and yet he committed the error without being conscious of it. The explanation is simply that in studying Humanity and in making it the center of sociology, he believed that he was studying an abstract phenomenon. He was mistaken: Humanity is a concrete whole, a being, the most abstract of all beings, no doubt, but a being all the same. The remark may seem to be subtle; but its logic is unassailable.

---

[1] Pol. Pos., II, pp. 55-56; Eng. tr., II, p. 50.

[2] Pol. Pos., II, pp. 56; Eng. tr., II, p. 50.

[3] Pol. Pos., II, pp. 264-265; Eng. tr., p. 222, lines 22-30; p. 348, lines 28-29; Eng. tr., p. 283, lines 22-24; p. 363, lines 22-26; Eng. tr., p. 295, lines 14-18.

In this seventh chapter, Comte is seeking to determine the extent to which it is possible to modify the abstract being Humanity. The essentially concrete nature of his conception is revealed by the fact that he is obliged to determine what abstract phenomena enter into the constitution of Humanity before he can solve the problems raised by the subject of his study. The immediate logical result is a return to the distinction made in the first chapter of the *Social Statics*, the distinction already referred to between collective phenomena and individual phenomena.

"It is now necessary," he says, "to apply to the human order these general principles of the true theory of modificability. For that purpose, I must first divide it definitively into its *two necessary modes, one collective, the other individual*, which constitute respectively social existence and moral existence. The first chapter of this volume having introduced this normal complement of my hierarchical encyclopedia, the last *should irrevocably establish this capital improvement*, of which the remainder of this treatise will give rise to the continuous application, especially in an implicit fashion." [1]

"This final conception of seven instead of six degrees in the encyclopedia is spontaneously announced in my preliminary discussion,[2] where the general plan of education, calling for a seven years course, is terminated by a year of morals after a year devoted to sociology." [3]

The validity of this conception is confirmed, he continues, "by the happy agreement that such a termination of the encyclopedia naturally establishes between the systematic wisdom which characterizes modern reason and the admirable instinct of the genius of antiquity" which "was proclaiming forty centuries ago that the knowledge of man was the true end of all our science." "For man, properly so-called, considered from the point of view of his fundamental reality . . . can not be understood without a preliminary knowledge of humanity, on whom he necessarily depends. It would moreover be superfluous to justify here the necessary subordination, already familiar to the reader, of social existence to the vital order and to the material order. Henceforward, by subdividing the last mentioned in an appropriate manner, the seven essential degrees will be obtained: mathematical, astronomical, physical, chemical, vital, social, and finally moral, which from now on will compose the great encyclopedic scale."[1]

---

[1] POL. POS., II, p. 432; Eng. tr., II, p. 352.

[2] That is, *The General View of Positivism*, which forms the greater part of the first volume of the POSITIVE POLITICS; see p. 176; Eng. tr., I, p. 192, for the allusion in the text.

[3] POL. POS., II, pp. 432-433; Eng. tr., II, p. 352.

There are, Comte indicates, "two essential objections aroused by this final subdivision of the human order into collective and individual."[2]

"In the first place, it seems too slightly pronounced when compared with the other degrees of the septenary hierarchy." It was Comte himself who raised this objection in his first chapter, as already seen (p. 55); but here he corrects his first judgment. This distinction, he affirms, constitutes a transition not less marked than that between physics and chemistry, between astronomy and physics, between mathematics and astronomy. "Sufficient usage has not yet brought about an appreciation of this final separation of moral existence proper from simple social existence." This distinction, in fact, "directly results from an extreme encyclopedic prolongation of the universal principle of my positive classification according to decreasing generality and increasing dependence. This last part of the abstract series is now seen to have no less importance than the preceding parts. If the series were not carried to this normal termination, concrete notions could not adequately be related to it." The last remark is particularly worthy of attention. It clearly reveals Comte's growing preoccupation with the highest phenomena of individual life.

"In the second place, *a too vague conception of biology* leads to representing the study of our individual existence as already contained in the general theory of vitality." The point of this objection should be thoroughly understood, because it is, in fact, an objection to the views of Comte himself as they are found in the *Positive Philosophy* and the first volume of the *Positive Politics*. His answer to this objection deserves profound study. It demonstrates clearly that Comte was coming to a more and more abstract conception of the domains of each of the sciences that compose what has been called Psychics. His words mark a definite phase in the evolution of his thought.

Biologists, he says, neglect the principal characteristics of true human nature. "At bottom, they study in us only the animal and not the man, all of whose essential attributes are habitually unknown to them . . . by virtue of their preoccupation with the body." And he continues in the following terms, the importance of which can not be exaggerated: *"True biology has in no wise the individual knowledge of man as its object, but only the general study of life,* envisaged above all in the totality of the beings that enjoy it. Biology constitutes a necessary preliminary, first of the theory of social order, immediately dependent upon the vital order, and then for the veritable appreciation of man proper, all of whose attributes are then known."[3] In short, biology is here reduced at last to an entirely abstract science, whose object is not all living organisms, but only the phenomena of vitality—that "fundamental vitality, alone common to all organized beings," which "consists

NB

---

[1] Pol. Pos., II, p. 433; Eng. tr., II, pp. 352-353.

[2] Pol. Pos., II, pp. 435-437; Eng. tr., pp. 354-357.

[3] Pol. Pos., II, p. 437; Eng. tr., II, p. 356.

in their continuous material renovation, the sole attribute which universally separates them from inert bodies, the composition of which is always fixed."[1] The final degree of precision here given to a conception previously somewhat vague implies many consequences, as will be seen.

As for Comte, the immediate consequence was the separation from biology of a mass of phenomena that had up to that time been regarded as belonging legitimately to its domain. The explanation of this separation is the following: The scientific efforts of Leroy, Cabanis and Gall had had as their result to combine once for all the knowledge of the soul with that of the body. Hence the possibility of a scientific study of the highest phenomena manifested by man, since they were in this way brought within the reach of science. "Neither physicians nor priests have yet adequately grasped the bearing of such a scientific revolution."[2] But the first result of this revolution had been to comprise in the domain of biology the moral phenomena along with the physiological.

Now Comte, by his new and strict delimitation of biology, separated these two elements, the physical and the moral, so recently united. Here was a second revolution, not less important than the first; and one whose consequences have hitherto been even less understood. The first revolution added a new domain to science, the domain of moral life, up to that time entirely under the control of theology and metaphysics. But in the course of this real progress, moral phenomena were erroneously placed in the domain of biology. It was Comte who discovered the error, and by the second revolution instituted the positive science which is to be devoted to the study of the new phenomena.

It was his constitution of the social domain that made possible the discovery of the error which had combined the physical and the moral; it was his separation of social into collective and individual which brought this error into the light. It was his separation of social into collective and individual that revealed this mistake because the study of collective life intercalates a middle term between the two extremes, the physical and the moral. This intercalation of a middle term permits the two extremes, hitherto identified, to be distinguished, and establishes the limits of the domain of each.

In consequence of this logical enchainment of ideas, Comte rose to the institution of a new abstract science. His conception of the object of the new science was to remain a long time indefinite, as will be seen; but the important fact to note is that a new abstract science had arisen. To this new science, Comte gave the name of "morals."[3]

This science, he says, in an effort to delimit its domain more exactly, differs from the two sciences that precede it, biology and sociology, in that it intimately combines them. "When biology is looked upon as merely outlining the study of human existence in the light of the study of the vegetative and animal functions, then sociology alone gives a knowledge of our intellectual and moral attributes, which become sufficiently appreciable only in their collective upgrowth. After them, the true final science, i. e. morals, is able to systematize *the special knowledge of our individual nature,* by virtue of an appropriate combination of the two points of view, the biological and the sociological, which are necessarily connected in it." [1]

---

[1] Pol. Pos., I, p. 586; Eng. tr., II, pp. 474-475.

[2] Pol. Pos., II, p. 437; Eng. tr., II, p. 356.

[3] No other translation has been attempted of the French term, "la morale."

"*Besides this deductive basis,* it directly requires, like any other science, the inductions appropriate to it." "Such a necessity results in this case especially from the fact that the science before it essentially makes abstraction of the continuous reaction between the physical and the moral of man, resulting from the necessary relations between the vegetative viscera and the affective organs. In fact, these *individual perturbations* do not sensibly alter collective existence and do so the less in proportion as the latter is more fully developed. Their mutual neutralization among different individuals leaves subsisting, in sociology, only the permanent influence of the truly collective attributes, even when consideration is limited to the case of simple objective solidarity. But these phenomena must still less affect the study of subjective continuity, which prevails more and more as regards the social order. For they neutralize themselves to a greater extent in the succession of generations than they do in the combination of individuals or families. Here above all is the reason why the domain of *anthropology*[2] *properly so-called is at once more special and more complicated than sociology itself.* Nevertheless, when it is called morals the disposition in happily encouraged never to seek in it anything but the normal bases of human conduct."[3]

At this point then in his philosophical evolution, Comte has made a great advance. He has divided social facts into collective and individual. At the beginning of the *Social Statics,* Comte had considered the social fact as specific and irreducible, and the individual fact as biological. His argument was: It is obvious that the individual (explained by biology) constitutes society. Consequently, the biological study of the individual organism should precede the sociological study of the social organism. The intellectual and moral life of animals, including man, is the highest degree of biological science. Biology studies organisms, sociology superorganisms; the one studies life, the other society, which gives us in its fullest development, Humanity. Hence the presence, after the vital order, of the social, i. e. human, order.

But at the end of the *Social Statics,* things have changed. Comte sees that the individual can not be entirely explained by biology. He has at last reached a complete comprehension of his own philosophical principles in their application to the study of life. Biology is not the study of an abstract organism, but the study of the exclusively vital or organic mode of life as it is to be observed in all living beings. His conception of biology is thus definitive, since all its implications are clear. He now sees also that the individual man is often influenced by society, especially as regards his feelings, and that in a way that biology cannot explain. Hence his growing conviction that there must be two varieties of phenomena in play; hence the distinction, growing more and more precise throughout the *Social Statics*, between the collective fact and the individual fact. This distinction is strengthened and made definitive by his effort to define the limits within which the social organism, the super-organism Humanity, can be modified.

---

[1] Pol. Pos., II, p. 438; Eng. tr., II, p. 357.

[2] This term was far from having its present meaning at the time Comte wrote. Note, for example, the following words from the third edition, 1843, of Demangeon's Physiologie Intellectuelle, p. 389: "The science that has for its object the study of man in general in his physical and moral organization, without excepting any race, is designated by the name of *anthropology* in Germany." (Paris, Fortin, Mason et Cie).

[3] Pol. Pos., II, p. 438; Eng. tr., III, p. 357.

The result of this evolution signifies, in sum, a complete reversal of the conceptions presented in the Introduction to the *Positive Politics*. In this Introduction, the individual precedes the society; here, at the end of the *Social Statics*, the collective order precedes the individual order. Certain hesitations, nevertheless, are to be observed in Comte's mind: thus he considers the collective order and the individual order as one in proportion as he is thinking of their product, society, the great society Humanity; but he separates them when he rises to the more complicated and more subtle study of the phenomena of art or religion. In the latter case, he carries to seven the number of the constituent members of the hierarchy.

Despite the important advance consisting in the establishment of the science that Comte called morals, there are still many difficulties to explain and numerous problems yet to arise. Intellectual and moral phenomena are definitively separated from biology, but where then are they to be placed? On the other hand, if biology studies only the animal *Homo*, what science will study Man? The reply to this latter question seems to be double: if by man is understood Humanity, the super-organism, the most complete type of society, then sociology must be called 1.
upon; if the word man is to be given the meaning of 'human being' perfected by centuries of social existence to the point where he has ceased 2.
to be the animal *Homo*, then the science above sociology must be interrogated.

This response, satisfactory as far as it goes, leaves many things vague. What is the special object of this new science? What is the specific nature of its phenomena? If sociology gives a knowledge of the intellectual and moral life, what knowledge is derived from morals? It gives special information concerning the individual nature of man, and for this end it combines the elements furnished by biology on the one hand and by sociology on the other. Here then is a presumably abstract science combining phenomena which are not its own. Here then is a conflict between the method of the new science and the principles on which the hierarchy is based. Morals, it is true, is founded also upon a certain number of inductions, applying especially to the phenomena resulting from the relations between the vegetative viscera and the affective organs. At this point Comte approaches most nearly an objective definition of the phenomena which constitute the proper domain of morals. It is a beginning. But he had not yet arrived at a precise definition of the word 'morals.' He was, at the moment, thinking of it almost exclusively as a synonym of "basis of conduct." He is still distant from his own general conception of a science as the abstract study of a specific phenomenon. Yet he is approaching his goal, and by an uninterrupted progress. His advance continues in the third volume of the *Positive Politics*, the *Social Dynamics*, and since this advance is the result of a more and more abstract definition of the science of sociology, attention must now be turned in this direction.

At the very beginning of the *Social Dynamics*, certain consequences of the distinctions established in the last chapter of the *Social Statics* are revealed. These consequences will first be stated, and then their origin will be explained.

In the first chapter of the *Social Dynamics*, Comte divides natural laws into three classes: moral, intellectual, and physical. He deduces this division subjectively from the cerebral constitution of man, the three elements of which are feeling, intellect, and activity,[1]—elements that had been established in the *Social Statics*. Further on in the same chapter of the *Social Dynamics*, Comte institutes the same division of natural laws objectively in the light of his classification of the various categories of phenomena, from mathematical to social. This successive institution of the classes of objective phenomena leads directly to the problem of the exact delimitation of the domains of the higher sciences of the hierarchy; and consequently to a new attempt to define the nature of the phenomena proper to each of these sciences.

The human or social order is divisible, Comte says here, into intellectual and moral. This distinction rests upon the following foundations: the mental order necessarily dominates the moral order, for each affection implies a sufficient knowledge of the corresponding object. On the contrary, intellectual laws are subordinated only to physical laws, material as well as vital. But the true development of theory can only be collective, for none of the veritable laws, statical or dynamical, proper to the intelligence, can be known except by virtue of sufficient exercise. Analogy with the exercise of the other vital functions, study of the intellects of animals, observation of the progress made by individual minds, even in the cases of the choicest geniuses—all these means of investigation can give but verification, never discoveries, of the laws of the intellect. It is only through the positive study of the grand evolution of man, including therein all the characteristic phases of history, that the real laws of the intellect can be discovered.[1] "All real appreciation of mental laws belongs then to the positive study of the whole development of humanity," [2] and this is the science of sociology.

---

[1] This term, it will be observed, has a special sense in Comte's philosophical vocabulary. It is constantly used in connection with the term "intellect" to which it is, in fact, completely parallel in meaning. The intellect, for Comte, comprised the cerebral organs whose purely general function it was to correlate and coördinate the sense impressions so as to produce ideas and thoughts. In a similar way, the "activity" comprised the cerebral organs whose purely general function it was to coördinate muscular contractions so as to produce true acts. Of course, the terms may denote either the organs or the functions; and it is in the latter, functional, sense that Comte usually employs them.

"But, reciprocally, sociology is essentially reducible to the true science of the understanding. For the study, statical or dynamical, of the human mind comprises as well the exercise of the practical reason as the upgrowth of the theoretical reason";[3] the first for the explanation of the facts of history, the second for revealing the source of the modifications in the methods by which phenomena have been successively envisaged. Sociology, then, embraces the study of the intellect; but it should also embrace that of the activity. This last addition, however, is of relatively little importance, because the study of the activity is concerned only with the ends which have from time to time guided action. "But although this complement is indispensable, it cannot prevent us from recognizing that sociology consists essentially of the study of the totality of the human intellect." [4]

"After such a science, the fundamental progression [physical, intellectual, moral] whence the true encyclopedic hierarchy must result leaves me to characterize summarily only its third term, the study of moral laws, the necessary ending place of all our sound speculations." [5] "This final domain is at once more special, more complex, and more eminent than that of sociology proper, which has just been exactly appreciated." [6] It is more special because "active life and even speculative life belong more to the whole sum of real existences than affective life, at least when the latter is considered in its entire plentitude, characterized above all by sociability." [7] It is more complex because feeling, "this center of existence," can undergo and modify impulsions from without only by the intermediation of the intellect and the activity. It is more eminent, whether on account of the superior dignity of its essential object, man, or by virtue of its theoretical plentitude. "Up to this point, all our speculations whatever can be nothing more than preliminary, without excepting those of sociology proper. They are limited to the gradual preparation, by the abstract study, first of materiality and vitality, then of the intelligence, of the concrete appreciation of the only final object of all human theory, man himself, in his indivisible existence. It is there solely that science terminates, thus becoming synthetic after having successively condensed its analytical conceptions." [8]

The fundamental principle of genuine unity, with which the science of morals deals, is feeling, which "in fact constitutes the essential domain of morals, theoretical as well as practical, since feeling dominates existence and directs conduct. Its systematic study had not been able hitherto to be more than sketched, or rather prepared, first indirectly in biology, then directly in sociology, where intellect and activity are the immediate subjects of interest. Morals alone can institute the proper appreciation of feeling by combining it worthily, not only with the influence of the world and that of society, but also with the affective reaction of the vegetative viscera, essentially negligible everywhere else. This intimate relation between the corporal existence and the cerebral economy had, in fact, to be set aside in biology as premature and in sociology as insensible in so far as the collective order is concerned. But in *the definitive study of the individual order*, it acquires a capital importance, both theoretical and practical." [1]

---

[1] Pol. Pos., III, pp. 45-46; Eng. tr., III, pp. 37-38.
[2] Pol. Pos., III, p. 47; Eng. tr., III, pp. 39-40.
[3] Pol. Pos., III, p. 47; Eng. tr., III, p. 40.
[4] Pol. Pos., III, p. 48; Eng. tr., III, p. 40.
[5] Pol. Pos., III, p. 48; Eng. tr., III, p. 40.
[6] Pol. Pos., III, p. 48; Eng. tr., III, p. 40.
[7] Pol. Pos., III, pp. 48-49; Eng. tr., III, pp. 40-41.
[8] Pol. Pos., III, p. 49; Eng. tr., III, p. 41.

Thus presented, the distinction between the two sciences and the definition of sociology which results from it remains intact throughout the remaining chapters of the *Social Dynamics*. These chapters, which are essentially only an application to the study of history of the law of the three states, leave aside the question of the nature of sociology and morals. This application of the law of the three states has no interest at the present point of progress of this study; a return will therefore be made to the evolution of the thought of Comte in regard to the nature of sociology.

In the passages just cited above, a certain advance is to be remarked, as a glance at the *Social Statics* will clearly show. In the *Social Statics*, the study of the organism precedes, in Comte's theory, the study of the super-organism, society. The only fully developed society is human society, whence Comte's identification of the social order with the human order. The human or social order is the product of all men considered as a whole, i. e. of Humanity, the social organism. Hence Comte gives several definitions of sociology: the study of the fundamental nature of the great organism and that of its necessary evolution;[2] the determination of the fundamental type of human existence and its necessary development;[3] the systematization of the theory of human existence and the theory of human movement.[4]

The first part of the double task that these definitions imply is essentially the search for the statical elements of human nature, i. e. the attributes common to Humanity in all times and all places. It is this investigation that occupies Comte in the *Social Statics*. Hence the necessity of the cerebral analysis at the end of the chapter on biology in the Fundamental Introduction to the *Positive Politics*, volume one. But how can one determine where the biological preliminaries end and where the sociological construction begins? The exact reply to this question is almost impossible to give: the confusion in logic which results from the intimate relations of biology and sociology is obvious. It has already been pointed out (p. 53) in the criticism of Comte's declaration that the cerebral analysis which emanates from sociology must be carried back into biology. Summed up as accurately as possible, the thought of Comte at the end of the *Social Statics* is this: the elements of human nature are sketched in the study of animality and perfected in the study of sociality. He finds no inconsistencies, then, in the affirmation that these elements are, by the statical study of sociology, and not by biology, fixed as three in number: feeling, intellect, and activity. In the *Social Statics,* consequently, sociology is the study of all the essential aspects of humanity, the only truly complete super-organism.[1]

---

[1] Pol. Pos., III, p. 50; Eng. tr., III, pp. 41-42.

[2] Pol. Pos., II, p. 1.

[3] Pol. Pos., II, p. 469; Eng. tr., II, p. 383.

[4] Pol. Pos., III, p. 3; Eng. tr., III, p. 2. The fundamental nature of the human order and the necessary course of its general development"; "the general laws of our constitution and the essential sequence of our antecedents," IV, p. 1.

Nevertheless, at the very beginning of the *Social Dynamics,* Comte makes a change in the conception just set forth with all possible precision. The reason for this change is as follows: Comte had been convinced by his meditations upon the facts of history that the actions of man are always determined by his feelings. There is no need to repeat the justifications for this conclusion; they are implied in the separation already defined between the collective and the individual orders. This separation, with its consequent institution of the science called morals, came only at the end of the *Social Statics.* The consequences of the new orientation are revealed immediately in the *Social Dynamics.* Feeling, Comte now understands, is essentially spontaneous; it is directed and regulated but not created nor determined by collective life. Hence the phenomena of feeling are beyond and above the investigations of sociology. Hence also the wide definition of sociology implicit in the *Social Statics* must be systematically narrowed. But how is this narrowing to be effected? The separation in theory between intelligence and activity on the one hand and feeling on the other makes the reply easy. The narrowing of the definition of sociology implied in the *Social Statics* must result from a methodical separation operated among the elements of human nature: intelligence and activity must be separated from feeling. Hence, as an immediate result, the new definition of sociology in the *Social Dynamics* already cited verbatim, namely, that which makes it the science of the intellect and the activity.

At this stage of his theoretical evolution, then, Comte had made another step in advance, the result of the growing exactness with which he envisages the domain of the science dealing with individual existence. He sees clearly that the hierarchy cannot be condensed in its sociological term. His words cannot be misunderstood: "My philosophical elaboration," the *Positive Philosophy,* "represented sociology as the universal ending-place of speculation; while here [i. e. in the *Social Dynamics* of the *Positive Politics*] this supremacy belongs only to morals, which, in the light of the preceding volume [the *Social Statics*] alone constitutes the terminus of science and the source of art. No real contradiction exists between these two judgments, since *my sociology at first included*

---

[1] See in the appendix the table of the hierarchy of the sciences. In the shaded portion an attempt is made to represent the domain of morals as Comte understood it at the moment of his intellectual evolution referred to in the text.

morals, although in a confused manner." [1] It may be asked, in the light of this avowal, whether it is possible to assert in a more incontestable manner the composite and therefore concrete nature of the social physics and the sociology of the *Positive Philosophy* and the first part of the *Positive Politics?* And Comte continues: "The normal separation between these two sciences is limited, then, to the improvement of the abstract hierarchy by carrying further the application of my encyclopedic principle. Such a step, the theoretical and practical importance of which will soon be felt by all true thinkers, will become, for posterity, the principal philosophical character of my second life." [2]

All these improvements in the thought of Comte mark a well defined phase in his philosophical evolution; from this point of view, they demand the most attentive consideration; their importance cannot be exaggerated. Despite these advances, however, numerous difficulties remain to be removed. Notice, in the first place, the singular logical structure of the first chapter of the *Social Dynamics*. This chapter, as has been seen, modifies if not revolutionizes the definition of sociology. There is every reason, then, to expect the discussion of this new definition in the opening pages of the volume. Yet nothing of the sort appears. The definitions already quoted are as if in the margin of this chapter. They are not even found in the first section of the chapter but come only in the course of an examination of one of the laws of sociology, namely, the law of classification, which explains the successive appearance of the various positive sciences. The exposition of this law gives Comte the opportunity to delimit the domains of the abstract sciences, and in particular the domains of the sciences which compose what has been called Psychics. The circumstance illustrates how the implicit became the explicit as Comte's mind advanced from one theoretical elaboration to another. In the case in point, a new definition of a science arose out of an attempt to make more precise the meaning of a fundamental law of the very science concerned.

Another singularity may be observed in the method by which the dynamical laws are established. Since sociology is an abstract science, and a new science at that, it might well be expected that its laws would be established by induction. Once more, nothing of the sort is done. These laws are presented, in the first chapter of the *Social Dynamics*, as deductions; deductions from a principle established in the *Social Statics*. Comte's words are these: "All systematic study of human evolution must, then, consist in the development of its one law: man becomes more and more religious," [3] that is to say—note the positive sense Comte attaches to his words—he "more and more develops his personal unity." [4] "In fact, social dynamics is reducible to the explanation of the past in the light of this fundamental principle, emanating from social statics."[1] "But though the principle of religious development should finally sum up all our labor, its direct application can not suffice. We should first deduce from it the laws proper to each essential aspect of the human movement, for they alone can explain history in an immediate manner."[2] For a science that has long been positive, as mechanics for example, dynamical laws may perhaps be deduced from statical laws,[3] but it is difficult to prevent a feeling of surprise at seeing a perfection so mature in a science so new.

---

[1] Pol. Pos., III, p. 5; Eng. tr., III, p. 4.

[2] Pol. Pos., III, p. 5; Eng. tr., III, p. 4.

[3] Pol. Pos., III, p. 10, lines 8-10; Eng. tr., III, pp. 8-9.

[4] Pol. Pos., III, p. 10, line 5; Eng. tr., III, p. 8, line 26.

A third singularity should be called to attention. In the first chapter, again, of the *Social Dynamics*, in a passage subsequent to that just quoted, it is surprising to see that in Comte's mind the law of constantly increasing personal unity is itself deduced from the operation of the principal dynamical laws! Here is the passage: Feeling, says Comte, to the exclusion of intellect and activity, is the source of personal harmony. "We may then ask in what its own peculiar general evolution consists. Doubtless it needs no distinct law. For, after the explanations placed at the beginning of this chapter [the first of the *Social Dynamics*] the affective movement must always be conceived of as the *resultant* of the final reactions due to the speculative and to the active movements. Nevertheless, it is fitting to appreciate the general progress of this resultant, alone decisive, in the light of the evolution of its two component elements."[4] That is to say, Comte despite his exclusion of feeling from the domain of sociology makes use of it in his construction of the philosophy of history. Obviously, the bases of this construction had been laid before the exclusion had been operated,, i. e. before sociology had been limited to the study of the intellect and the activity and before the study of feeling had been transferred to the domain of morals.

There are still other difficulties. For example, what is the definition and the purpose of the statical part of sociology? According to the *Social Statics*, this portion of the science should study the fundamental nature of humanity is its three aspects: feeling, intelligence, activity. But according to the definition given in the *Social Dynamics*, sociology deals with but two of these elements: intellect and activity. Hence the necessity of an ulterior revision of the nature of statics. Another difficulty is this: One of the objects of statics, as first presented, is to analyze the fundamental nature of man, i. e. to discover the statical elements of human nature. But if sociology deals with only two of these elements, obviously it cannot be the function of statics to analyze human nature, since human nature as a whole is no longer in the domain of sociology. It would seem then that biology must be looked to for this knowledge of man; but in reality, Comte transports it to morals, the science above sociology in the scientific scale. A complete revision of the conception of sociological statics thus becomes inevitable. If sociology is no longer the study of the social organism as a whole, sociological statics can not deal with human nature in its entirety; if the science of morals is to analyze human nature,[1] sociological statics can not deal with the problem at all. Thus the *Social Statics* of the *Positive Politics* disappears entirely, its domain having been given to another science. The inevitable revision is, in fact, to be found in the fourth volume of the *Positive Politics*, where Comte for the last time systematized his philosophical labors in their totality, as will later be seen.

---

[1] Pol. Pos., III, p. 10; Eng. tr., III, p. 9.
[2] Pol. Pos., III, p. 10; Eng. tr., III, p. 9.
[3] On this question, consult Pol. Pos., II, ch. 7.
[4] Pol. Pos., III, p. 68; Eng. tr., III, p. 56.

A last problem deserves attention. Here is one of the rare cases in which Comte was led into an inconsistency by the force of logic. Sociology, he said, precedes morals in the scientific hierarchy. The phenomena of the first mentioned science must therefore be more general than those of the second; i. e. the manifestations of intellect and activity must be more generally observable than those of feeling, if the principle of decreasing generality is to apply here as everywhere else in the encyclopedic hierarchy. And this is exactly what Comte does say in the following passage: "In fact, active life, and even speculative life, belong more to the whole sum of real existences than affective life" . . . Yet he had already spoken of feeling as "the supreme motor of human existence," the "center of existence." Here is an evident contradiction. As a matter of fact, Comte modifies his affirmation by continuing, without a break, the quotation above as follows: " . . . at least when the latter is considered in its entire plentitude, characterized above all by sociability."[2] Nevertheless this restriction is nothing less than an assertion that affective life should be limited to one of its forms, that sociability alone is truly affective. This limitation can not be sustained. It is true that intellect and activity are more generally observable than sociability; it is not true that intellect and activity are more generally observable than feeling. This passage, with its restriction, deserves attention: it seems to be the point of departure of a development which stopped only when feeling, intellect, and activity, all three, had been included in the domain of morals.

All these uncertainties and inconsistencies just cited seem to arise from a certain vagueness of thought. They are, in fact, the results of the efforts of a philosophical genius to attain complete rationality. The difficulties that Comte found are but evidences of the extraordinary complication of the problem he was seeking to solve. His genius is not diminished by these inconsistencies; to speak frankly, his successors in the domain of sociology have rarely reached a comprehension of the difficulties with which he was struggling. The center of these difficulties is the new science, morals. Every time that Comte attained to a more precise conception of the nature and domain of this new science, he had at the same time to make more precise his understanding of the nature and domain of both biology and sociology. Comte, in fact, was, without being conscious of the ultimate goal of his labors, engaged upon the complete analysis of Psychics. Certain of his advances have already been seen; others will be met as his philosophical evolution is followed through the fourth volume of the *Positive Politics*.

---

[1] Nothing could show better than this action of Comte's how untrue to his spirit are those renderings of his philosophy which represent him as intercalating a so-called psychology between biology and sociology. What psychology is and what is its place, if any, in the hierarchy of the sciences will be discussed in the last chapter of this volume; suffice it to say here that there is not the slightest authority in all the volumes of Comte for the introduction at the point noted of any science whatever. Comte placed the phenomena in question above and beyond sociology; and any other arrangement of his encyclopedia implies a complete misunderstanding of his ripest thought.

[2] POL. POS., III, pp. 48-49; Eng. tr., III, pp. 40-41.

The title of the fourth volume of the *Positive Politics* is the following: "A Synthetic View of the Human Future." This volume was designed to establish the principles in the light of which the transition from the present state of Humanity to its positive state should be operated. The thought that animated Comte from beginning to end of his life was the conception that the route of the development and progress of mankind could be traced in a systematic fashion; that men could thus be spared their empirical gropings toward the future. It has never been sufficiently understood that all of Comte's intellectual activity was exerted with this one intention and for this one aim. Throughout his life, his eyes were fixed upon this distant but possible result. All his meditations, all his works were but the means for attaining the philosophic ideal he had set himself. His books were not written for themselves. He did but commit to their pages the successive steps of his thought as it ever advanced toward its ultimate goal. In them he registered his reasoning, its phases, its hesitations. Hence the difficulties of his style, which is constantly seeking to attain to the utmost possible precision. For him, these imperfections were of relative unimportance; they could not be allowed to hinder him in his long and arduous pursuit. Mankind was in sore need of direction, of sure principles for political guidance. Before these indispensable principles could be established, the solidity of the scientific foundations on which they must rest had to be verified. Hence the *Positive Philosophy*, which had value in Comte's eyes only in the measure in which it permitted him to traverse the encyclopedia of the sciences and attain at last to sociology, itself but an incident in the life of the great renovator.[1]

NB

But just as the *Philosophy* had made sociology possible, so sociology makes it possible for man to modify his own development. Hence the idea that the passage from the present to the positive state of the future can be regulated systematically. Such an enterprise, however, could be undertaken only in the light of a representation of this future state of mankind. The knowledge of the laws, statical and dynamical, of social development enabled such a prevision to be made; and Comte, consequently, devotes the first part of the fourth volume of the *Positive*

---

[1] "It was right that I should expound in lectures, nay, even write, my course of *Positive Philosophy*, but I ought not to have published it, except at the end of my career, purely as an historical document . . . The preparation accomplished in that course was absolutely indispensable to myself, but I could and ought have spared it to the public . . ." Comte, in a letter to Dr. Audiffrent, dated May 28, 1857.

Vol 4

Politics to an analysis, in its main lines, of the future state of humanity.

In this analysis, the element of interest for the present volume is the part in which Comte indicates the scientific conceptions which will underlie the intellectual life of the positive future. In expressing these conceptions—to be found in the third chapter of the last volume of the *Positive Politics*—Comte's thought took an audacious form, well worthy of attention. For him, the organization and reduction to law of all observable phenomena has been accomplished by science; all the abstract sciences have reached a degree of positivity comparable with, but superior to, that of astronomy today. Science in its entirety has reached the point at which it can be condensed and presented to the mind in its most logical order, in its greatest simplicity.

The practical utility of such a conception, the value of such a condensation, even though it remains for the future to develop the details, need scarcely be pointed out. By its aid the mind is at last able to see clearly into the mass of scientific acquisitions, thus transformed into a logically coördinated system. Man will thereby be enabled to take stock of his knowledge; to see what he knows, what he does not know, what he should know. He will have all the greater confidence in Science as he sees it thus submitted to a rigorous and yet limpid organization.

The career of Comte was too far advanced for him even to think of attempting such a condensation; and needless to say he would not have considered it definitive, if he had been able to make it. The task will be accomplished by his successors. Nevertheless, he draws up the plans and sketches the edifice to be constructed. The conception takes the form in his mind of a series of seven volumes, each of which will be devoted to one of the seven sciences of the hierarchy. He himself later wrote the first volume, dealing with mathematics,[1] outlined only in the chapter now under discussion. The contents of the volumes from mathematics up to and including chemistry are summarily sketched. When, however, he reaches the sciences of biology, sociology, and morals, he feels how greatly, even in his own mind, the domains of these three sciences are still lacking in precision, and therefore sets himself to throw further light upon this portion of the encyclopedia.

He begins with a more accurate delimitation of the science of biology than is to be found in his treatment of that science in either the *Positive Philosophy* or the Fundamental Introduction to the *Positive Politics*.[2] In his exposition of the final systematization of the science, although he follows in the main the conceptions of the Fundamental Introduction, he effects a correction,—"*une épuration*,"—the importance of which cannot be exaggerated. "In the Introduction," he says, "the systematization of biology is placed between two expositions essentially foreign to the fifth encyclopedic phase, but which I could not at the time introduce elsewhere and of which, nevertheless, I had need in order to institute sociology. Both of them really concern the final science, one for the theory of unity, the other as regards the cerebral synthesis."[1] Do these words need to be italicized in order to call attention to their significance? In clear terms, Comte affirms that the sociology of the *Social Statics* and of the *Social Dynamics* rests upon data belonging to the domain of morals, a new abstract science which he now places beyond sociology in the scale. Here, then, is a grave philosophical error; but it is to be corrected almost immediately, as will be seen.

---

[1] La Synthèse Subjective, volume one, the only volume written, entitled La Logique positive.

[2] Comte twice studied in his career the nature and domain of biology. The first of these discussions is to be found in the *Positive Philosophy*, volume three, second half; the second in the *Positive Politics*, volume one, Fundamental Introduction, chapter three. Both these discussions are reviewed for the last time in the passage under examination in the text above.

The new condensation of biology completed, Comte turns to the last two terms of the scientific hierarchy, "the irrevocable separation of which sums up the principal superiority" of the *Positive Politics* over the *Positive Philosophy.* He begins with sociology.

The plan for the future volume of sociology results from a combination into a single volume of the two volumes in which he had respectively constituted the two parts of the science of sociology, i. e. the *Social Statics* and the *Social Dynmaics.* "It is evident that this plan consists in condensing the double elaboration that I am completing, without requiring any truly new conception, *after having separated morals,* the rise of which, resulting from my labors, could not hold therein a sufficiently dominating position."[2] This condensation was to have seven chapters, plus an introduction and a conclusion. The introduction was to define the general constitution of sociology and its subordination to biology; the conclusion was to sum up the essential results of the science and show how it prepares the way for morals. And Comte continues in words that contain the key to the difficulties that today trouble all the psychical sciences: "These two appreciations are in this case more urgent and more difficult than in the anterior cases, since the approach to the goal leads to an attempt to overstep the degrees. *When biology had been sketched, an attempt was made to found morals without having instituted sociology; and the initiation of the individual will always tend to reproduce this spontaneous inclination of collective evolution.* My career became decisive only through the construction of social science, the necessary interposition of which it will always be necessary to give the reasons for, although this explanation no longer requires the efforts and the developments it demanded of me. After having studied the milieu, then the body, it is necessary to begin the systematic study of the soul by revealing the laws, statical and dynamical, of the intellect and the activity, in the light of collective existence, directly relative to the Great Being [Humanity]. The appreciation of the latter leads to the completion of sacred science [i. e. moral science] by the study of true unity, in order to develop and consolidate the true Providence [Humanity] through a regulation of the feelings, thoughts, and acts of its voluntary servitors." [1]

---

[1] POL. POS., IV, p. 217; Eng. tr. IV, p. 192. For the theory of unity, see POL. POS., I, pp. 109-139; Eng. tr., I, pp. 493-517; for the cerebral synthesis, see pp. 669-734; Eng. tr., pp. 540-593, of the same chapter.

[2] POL. POS., IV, p. 229; Eng. tr., IV, p. 202.

Of the seven chapters of the volume, four were to deal with statics and three with dynamics. Very significant is the omission of several matters contained in the *Social Statics*. For example, Comte omits entirely the subject of the first chapter of the latter treatise. This chapter, it will be recalled, discusses the question of religion—i. e. the problem of human unity—a problem that Comte, at the beginning of his work, had considered to be entirely biological in its nature. Transported first from biology to sociology, it now is definitely incorporated in morals. Equally significant is the method employed by Comte to revise the other chapters of the *Social Statics* and incorporate them into the single sociological volume of the future. In each case, as will be seen later, the titles of the four statical chapters are the same as those of the corresponding chapters of the *Social Statics;* but, in fact, the objects of these chapters are very different from those of the *Social Statics.* The relative importance of these objects has been entirely changed. The materials which are to be the primary concern of the future chapters appear almost incidentally in the pages of the corresponding chapters of the *Social Statics.* In each case, the method by which the change is operated is the separation of feeling from intellect and activity—elements which are all combined in the *Social Statics.*

The condensation of the dynamic part of sociology into three chapters results from a more abstract conception of social evolution than that of the *Social Dynamics,* where entirely concrete problems intrude themselves from time to time. Considered as a whole, this plan for the condensation of the *Social Statics* and the *Social Dynamics* is a striking proof of the thesis defended in these pages, namely: the sociology of the *Social Statics* and the *Social Dynamics* is a composite or concrete science and not a component or abstract science.

Sociology once condensed, Comte passed to the consideration of morals, the final science. "Up to this point," he says, "speculation remains, even in sociology, abstract and preparatory, by virtue of the decreasing separation between subject and object. But here their full coincidence institutes the definitive state of human reason; since the development of the objective analysis completes therein the establishment of the subjective synthesis." [2] Also, "it is there that is operated the general transition between theoretical existence and active life." There is, nevertheless, between the parts of this science, the theoretical and the practical, a distinction sufficiently clear to cause their separation and to justify the study of the theoretical aspects of morals in a separate volume. This volume would be devoted to theoretical morals, i. e. "the direct study of man," and would not be concerned with the problem of the regulation of conduct, which would be the subject of a complementary volume. "The direct study of the human art" would in this way follow "the construction of the human science." [1]

---

[1] Pol. Pos., IV, pp. 228-229; Eng. tr., IV, p. 202.

[2] Pol. Pos., IV, p. 230; Eng. tr., IV, p. 203.

According to the plan of Comte for this theoretical volume on morals, its introduction was to insist upon the necessity of a systematic separation between sociology and morals, and to demonstrate the superiority of the latter over all other sciences, which were, indeed, but so many necessary preparations for it. From the point of view of logic, morals completes the positive method: deduction in mathematics, observation in astronomy, experimentation in physics, nomenclature in chemistry, comparison in biology, filiation in sociology, the subjective method in morals. The last alone is appropriate "for regulating all the others, by virtue of an entire coincidence between the object and the subject, always separated up to that point, although to a less and less degree." [2] From the point of view of science, morals alone allows of a full rationality, because the human point of view is mingled subjectively in all aspects of theory; and until the knowledge of man has been systematized, the other scientific theories will remain incomplete.[3]

The subordination of all the other sciences as regards moral science is especially to be remarked in the case of sociology. After the inferior sciences have "suitably sketched the knowledge of the milieu, completed by that of the body," the superior sciences begin "the systematic study of the soul, by appreciating collective existence, at first statical and then dynamical. But this necessary examination constitutes only a last preparation, the incomplete character of which is undeniable. From it arises the feeling that since the special study of the intellect and the activity are therein separated from that of the feeling, *such special study permits only of an appreciation of results,* the source and destination of which belong to the science that follows it. If this false position of the mind is not manifest in the treatise I am completing, the fact is due only to the circumstance that *in it the elaboration of morals is spontaneously mingled with the construction of sociology.*" [4] Despite the systematic superiority of the *Positive Politics* over the *Positive Philosophy,* the first "can not exhibit the complete rationality to which I always aspired. *For the normal separation between sociology and morals, alone decisive from a synthetic point of view, arose while I was executing an elaboration that it should have dominated.* The attitude required for a direct dogmatization could irrevocably prevail only in this final volume, by virtue of the whole sum of successive preparations, which, I dare say, are no less suited to the needs of the public than to my own." [5]

So ends Comte's appreciation of his own philosophical labors. Is it, or is it not, a clear-cut affirmation that he never wrote a purely abstract sociology, a sociology that would satisfy his last conceptions? In the words just quoted is an incontestable avowal of the difficulties Comte had found in the philosophical path on which he had entered at the beginning of his career. It cost him thirty years of arduous labor to overcome these obstacles. With the passage of time, his conceptions became clearer and clearer; he more and more profoundly comprehended the abstract nature of the science he was striving to construct; but nothing is more certain than the fact that the social physics of the *Positive Philosophy* and the sociology of the *Positive Politics* are not the sociology that he would have written if he had been able to take the third chapter of the fourth volume of the *Positive Politics* as his point of departure.

---

[1] POL. POS., IV, p. 230; Eng. tr., IV, p. 203.
[2] POL. POS., IV, p. 231; Eng. tr., IV, p. 204.
[3] POL. POS., IV, pp. 231-232; Eng. tr., IV, p. 204.
[4] POL. POS., IV, p. 232; Eng. tr., p. 205.
[5] POL. POS., IV, p. 233; Eng. tr., IV, pp. 205-206.

What then is the philosophical position of Comte as regards sociology at the end of the *Positive Politics?* In the *Positive Philosophy*, the knowledge of the individual, obtained from biology, is a necessary preliminary for the study of society, the second aiding in turn to perfect the first. At the end of the *Positive Politics*, biology is limited to the study of vitality, a single one of the modes of living; sociology deals with collective life and reveals the functioning of the intellect and the activity, two of the three elements of human nature, which no longer is in the domain of biology. Morals studies the third element of human nature, the feeling, this "essential center of human existence." In other terms, biology treats of the vital organism; sociology of the collective being; and morals of the individual unity. Or, finally, in the words of Laffitte: "Biology is the general theory of vitality and of living beings, vegetal and animal; sociology the general theory of collective beings, but especially of the Humanity formed by the most eminent of living beings, man; finally, morals the theory of individual man, as developed by the evolution of Humanity and conceived of as an element of this Humanity itself."[1]

At this point of the present investigation, it might seem that the analysis of Psychics was complete; that the elements of the third great division of observable phenomena had been discovered. In a broad sense, this division has, in fact, been effected; but the classes resulting therefrom are far from being well defined; the specificity of these classes is scarcely demonstrated; the sciences which are to deal with them are but instituted; they are not constituted. And besides, they did not remain at the stage of evolution defined in the preceding paragraph.

Comte, after having completed his *Positive Politics*, started upon his *Subjective Synthesis*, a vast philosophical construction that was to fill four volumes. The second of these volumes was to be devoted to the theoretical study of morals, "the direct study of man." In this volume, Comte had intended to develop systematically the science toward which his whole philosophical career had steadily been conducting him. He had devoted the year before his death to the meditation that always preceded the composition of each of his works. As for the details of this meditation we have but the very rare allusions to the subject found in his letters; but as regards the main results, it is possible to make definite statements, for Comte drew up the formal plan for the volume,[1] providing for seven chapters, an introduction and a conclusion, and transmitted it to several of his disciples.

---

[1] Cours de Philosophie première, II, pp. 129-130.

The study of this plan, though it is disconcerting at the first glance, should not cause discouragement, for it will indicate the path that investigators should follow.

In the light of the last of the discussions of the science of morals summarized in this chapter, no one will be surprised to learn that the projected volume was destined, at its very beginning, to make an analysis of human nature, i. e. to revise the cerebral theory that was originally believed by Comte to be biological in its nature; no one will be surprised to see that another chapter was to have been devoted to the theory of unity, first a part of biology, then transported to sociology, and finally assigned definitively to morals. Still another chapter was planned to deal with the relations between the physical and the moral; and this, too, is easily comprehensible after Comte's constant concern with the cerebral reactions of the vegetative viscera. But when the last definitions of sociology are recalled—especially the definition of the *Social Dynamics* which reduces sociology to the true science of the understanding, for "the study, statical or dynamical, of the human mind includes the exercise of the practical reason as well as the upgrowth of the theoretical reason" [2]—when these words are recalled, is it not astonishing to see that one of the principal chapters of the projected volume was to have presented the laws of the intellect: "theoretical reason, practical reason, mental harmony"; and that another of these chapters was to have dealt with the activity? Is it not disconcerting to see transported to morals the study of the intellect and the activity, that is to say, the entire domain of sociology as it is defined in the last volume of the *Positive Politics?* And to make the problem still more perplexing, no explanation of this seeming anomaly is to be found in any of Comte's works.

Then must the attempt to remove all these difficulties be abandoned for ever? Is there real justification for the belief that many have held that Comte in the last period of his life sank into the depths of self-contradiction; that he lost footing in his profound abstractions; that a kind of cloud darkened his intellectual vision; that his mind lost its acuteness through his mystic contemplation of the image of Clotilde de Vaux?

Certainly not! Such an attitude would be, to begin with, a manifestation of a lack of confidence and respect that the genius of Auguste Comte is far from deserving. Besides, such an attitude, already unseemly, would be contrary to the spirit of all sincere scientific investigation, especially on the part of those who recall that neither the *Positive Philosophy,* nor the *Positive Politics* were regarded by Comte himself as definitive. Let what has already been said be repeated: these works do but mark the main phases of his thought ever in movement. Contradiction between the *Subjective Synthesis* and the *Positive Politics?* Yes; just as there were differences between the *Positive Politics* and the *Positive Philosophy.* Such discrepancies are with Comte but synonyms of advances in thought.

---

[1] This formal plan is reproduced in the appendix of the present volume.

[2] Pol. Pos., III, p. 47; Eng. tr., III, p. 40.

X It is in this spirit that the problem of the positive and definitive constitution of sociology must be attacked. Comte himself furnishes almost all the requisite data, and in any case a method that has demonstrated its worth. What must be done is to continue the analysis left unfinished by Comte, to make precise the points that he left vague. The proud heritage that he left to mankind should not be wasted, but should be made to bear its fruits. Humanity, afflicted with the social disorder of today, must not reward with ungrateful indifference him who consecrated his whole life to establishing upon unshakable foundations the laws of its improvement and perfection—him whom death snatched all too soon from the pursuit of the ideal that was his through an immense love of mankind.

The road he opened should be followed. It is clear that if morals is to include the theory of the intellect and the activity, sociology can not study the same subjects. The sole possible and logical explanation of the difficulty is that Comte was on the point of attaining complete rationality in sociology; and that the introduction to the projected volume on morals would have contained his most mature conception of the nature of the sociological domain. No other hypothesis better accords with the genius of Comte and with the evolution of his thought as a whole. Moreover, this hypothesis alone aids the investigator by suggesting to him the direction that his own efforts should take.

Comte, as has been seen, was slowly but surely advancing toward a more positive conception of sociology, one that would make of it a completely abstract science. The very institution of morals, though complicating the problem in a certain way, rendered it more simple in another. If sociology is not the science of the intellect and the activity, what, definitively, is it? It must be, it seems, the science of an abstract phenomenon comparable to that which was finally seen to be the object of an abstract biology. The first effort here must, then, strive to reach an abstract and comprehensive definition which will put sociology in the same position as that occupied by an abstract biology. Such a definition would bring order into the existent disorder, and would throw light upon the ideas of Comte as well as upon the whole mass of phenomena included in Psychics.

It is worth remarking, in this connection, that there is to be found, in the whole work of Comte, no objective definition of the sociological fact. The omission is due, beyond question, to Comte's uncritical acceptance of the views current at his time. For his contemporaries, it was beyond question that the distinction between individual and society was the last word in the analysis of phenomena. This position Comte accepted without suspecting that it was opposed to his own distinction between the abstract and the concrete. He did ultimately discover the discordance, as the remainder of this volume will demonstrate; but it cost him thirty years of labor to see that individuals and societies are not abstract properties but concrete beings. The fact that he finally made this discovery, however, renders it all the more clear that at the beginning of his work he considered the science of sociology, dealing with society, to have as its domain all the phenomena that the science of biology, dealing with the individual, did not include. Hence the social fact, in the *Positive Philosophy*, is defined negatively, by a method of elimination, as Levy-Bruhl states.[1] Other and more direct attempts at the desired definition are to be found in Comte's works, as has been seen, but when these efforts are closely examined, they will be found to be, all of them, essentially subjective.

Since the death of Comte, numerous writers have endeavored to formulate the indispensable definition.[2] The present effort differs from those that have preceded it in that it is made in obedience to the fundamental principles established by Comte, and without losing sight of his work as a whole. It is an attempt to continue the advance of positive theory by commencing at the point where Comte stopped. It strives to follow logically the evolution of his thought and to reach, always respecting his method, the goal he never ceased to have in view: the completely rational determination of the object of a purely abstract sociology.

---

[1] Levy-Bruhl, LA PHILOSOPHIE D'AUGUSTE COMTE, Book III, Chapter II, Section III; English translation, Sonnenschein, London, 1903, p. 234.

This volume, the purpose of which was to deal with the exclusively philosophical aspects of Comte's teachings, is misleading in several important respects. In the first place, it is limited almost wholly to the Comte of the *Positive Philosophy*. Now such a limitation, as the present chapter amply demonstrates, is entirely impracticable. Even from the strictly philosophical point of view, Comte's theories underwent a steady evolution, which was still in progress at the very day of his death. To present the Comte of the *Philosophy* only is therefore to present a mutilated Comte. In the second place, the exposition that this volume makes of the Comte of the *Philosophy* is erroneous in a very important point. It intercalates between biology and sociology a so-called 'psychology.' Now it is needless to say that whatever Spencer and others may have done, Comte did nothing of the sort. The phenomena involved were placed first in biology, then transported to sociology, and finally became the basis of a new science of morals. This solution of the difficulty may or may not be accepted in the future, but it was at any rate Comte's solution, and any other is unfaithful to his philosophical teachings.

[2] Among these efforts the work of A. Coste, LES PRINCIPES D'UNE SOCIOLOGIE OBJECTIVE, Alcan, Paris, 1899, should not be forgotten. Its first pages, especially pages 1-95, deserve careful reading.

PART II

THE SCIENCE OF SOCIALITY

The present chapter has for its purpose to define the abstract societal fact in such a way as to allow of an exact delimitation of the science of sociology.

For this purpose, three sources of assistance have been utilized: the principle of classification on which the hierarchy of the sciences was constructed; the increasing abstraction with which Comte defined the idea of Humanity; and the conception underlying Sumner's treatment of the Folkways. As a result, there emerges a definition of the essential sociological phenomenon as a collective cumulation,—an irreducible phenomenon as clearly distinguishable from the biological as from the psychological, and so the basis for an independent abstract science.

The societal fact once defined, the question is raised whether the fact is an objective fact; and the question is answered in the affirmative.

CHAPTER V.

The Societal Fact

TO follow in the steps of Comte, to retrace the path he marked out, to find the objective definition of sociology to which he never quite attained: such is the task of this chapter.

Among the reasons why Comte never gave an objective definition of sociology, there are two that are worthy of special mention. The first is that the essentially political nature of the work he was striving to accomplish never required such a definition. At the beginning of his career, he thought that sociology embraced all phenomena above the biological; and so he never felt the need for a definition. This is his position in the *Positive Philosophy* and the first part of the *Positive Politics.* Then, in the *Social Statics,* the fact that human nature in its three divisions of intellect, activity, and feeling seemed to constitute the domain of sociological statics obviated the need for an objective definition. Finally, the limitation of the sociological domain that Comte effected when he divided intellect and activity from feeling so reduced the distance between the subject and the object of sociology that the absence of a definition of the latter passed unnoticed. In all these cases, Comte, holding steadily in view his ultimate goal of social regeneration, had no need of a purely objective presentation of the specific nature of the phenomena on which his social science had to rest.

The second reason worthy of remark is more fundamental than the first. It consists in a conception of the problem of sociology universally held at the period in which Comte wrote. This erroneous conception, dominant even today, takes two forms, by each of which Comte was in turn to be embarrassed. The essence of this double error is the assumption, to be found in practically all sociological discussion, that this science must deal with the relations between the individual and society. The two forms of this universal belief are the following: 1. The individual makes society. This is the theoretical position of Comte in the *Positive Philosophy* and the first volume of the *Positive Politics,* where, however, it was coming to be questioned. 2. Society determines the individual. This is the theoretical position of Comte in the remainder of the *Positive Politics,* where, however, its solidity was being more and more shaken as the science of morals went on developing. In Comte's case, the conviction that social science must deal with the relations between the individual and society was the result of conceptions universally held and accepted by him without question. The fact that his thought evolved from the first of these conceptions to the second is due to his slowly maturing understanding of society and human society in particular as a Great Being, a super-organism, for whom individuals are but the agents.

No comment is needed on the first of these reasons for Comte's failure to give an objective definition of sociology. It is only necessary to recall his avowal that he had never reached the complete rationality to which he had ever aspired. As for the second reason, it is of the utmost importance to assert that despite all opinions to the contrary the science of sociology is not concerned at all with the relations between organism and super-organism; that for the science of sociology in the proper, i. e. abstract, sense, the problem of the relations between the individual and society simply does not exist. Perhaps the assertion may seem exaggerated and audacious. No matter; it can easily be justified in the light of the fundamental principles of the positive philosophy. No wonder that Comte was constantly handicapped by having to deal with this problem; he was thirty years in discovering that his initial assumption had been baseless.

But how can sociology not be concerned with a question that seems so obviously to belong to it? It will be sufficient, to make the matter clear, to recall the distinction, already explained at length, between the abstract and the concrete sciences. An abstract science is based upon induction and deals only with an irreducible class of specific phenomena. These sciences of which the hierarchy is composed do not study beings, but only events, in Comte's language, i. e. attributes or properties. A being is always composed of several phenomena proper to different abstract classes. Laffitte gives a definition of the word which throws light upon the thought involved here: "A being is nothing else than a certain constant combination, lasting a longer or shorter time, of a certain number of phenomena, constituting a group that can be considered as distinct in the midst of the general system of things," [1] or more succinctly, a being is "a sum of interrelated phenomena evolving according to determinate laws." [2] Nothing, then, it would seem, can be more incontestable than the affirmation that a science which studies beings, no matter of what order, must of necessity be a concrete science.

The conclusion seems obvious; and its validity in logic is not weakened by the fact that the mind can conceive a type of being of a very high degree of abstraction. Thus, for example, "the vegetal" and "the animal" are abstract beings, i. e. they are combinations of abstract phenomena in which the special differences of particular organisms are set aside in order to heighten the emphasis laid upon the characters common to all of a number of them. It is exactly the same with the "individual" and "society." They are beings, highly abstract no doubt, but beings, i. e., combinations of phenomena all the same. Admittedly, the conception is difficult to grasp at its first presentation, for it carries the analysis of phenomena to a height rarely attained hitherto; it is even possible to consider it purely verbal or metaphysical; nevertheless the use that is to be made of it in this chapter will demonstrate its reality.

How far the definitions of sociology already quoted are from filling the necessary conditions for the constitution of an abstract science such as it has been defined!

Here are other of Comte's efforts to define sociology: Sociology is

---

[1] COURS DE PHILOSOPHIE PREMIÈRE, II, p. 213.

[2] COURS DE PHILOSOPHIE PREMIÈRE, II, p. 216.

"the positive study of Humanity"; it is from the dynamical point of view, "the positive study of the development of Humanity as a whole." The definition of Laffitte's already given only puts the concrete nature of the object of sociology more clearly into the light. To say that sociology is the "general theory of collective beings" does not satisfy the conditions necessary for making it an abstract science: this definition does not replace a being by an abstract phenomenon. None of the foregoing definitions reaches the level of abstraction of that which fixes the nature of biology thus: the science of the abstract phenomenon of life "envisaged especially in the entire number of beings that enjoy it,"[1] that is to say, the study of that "fundamental vitality, common to all organized beings" which consists in their "continuous renewal of material substance."[2] But if biology studies the phenomenon of "continuous renewal of substance" what is the phenomenon studied by sociology? Such is the question this chapter will answer. The formulation of such a definition will naturally imply the salutary abandonment of all the imperfect definitions of sociology now existent.

To make this advance, to find the sociological phenomenon corresponding to the biological phenomenon, the main guide must be the fundamental principles on which rests the encyclopedia of the sciences. Their logical force alone would suffice to effect the necessary transformation of sociology as it now is into a science purely abstract. But this change can be accelerated by the employment of two auxiliary sources of sociological suggestion. The first of these two sources is naturally the work of Comte, and above all his conception of Humanity,—a conception that became more and more abstract as his philosophy matured. The second is the work of Sumner,[3] a sociologist who was influenced by Comte only in the most general fashion; who took from Comte only the idea that a social science was possible; who strove to establish such a science on foundations that are in appearance very different from those laid by Comte, though they are in reality analogous. The efforts of these two men in fact converge; their convergence augments the authority of each. Neither the one nor the other ever reached the degree of abstraction here sought; but their results, interpreted in the light of the definition of abstract science will be of inestimable service in indicating the path to be followed. To the guidance afforded by the general principles of Science in the abstract, there are here to be added the individual efforts of Comte and Sumner. These three elements, these three influences, will make it possible to formulate a definition of sociology comparable to that just given of biology; to define at last the sociological fact.

---

[1] POL. POS., II, p. 437; Eng. tr., II. p. 356.

[2] POL. POS., I, p. 586.

[3] William Graham Sumner (1840-1910). Professor of Political and Social Sciences at Yale University 1872-1909; president of the American Sociological Society in 1909.

The purpose of this chapter thus defined, its first task, is to retrace the path that led Comte to his most abstract conception of Humanity, the very heart of his most mature work.

Comte owed his first conception of Humanity to his predecessors in the social domain. With his customary concern for the filiation of his ideas, he indicates its sources clearly. The acknowledgement is to be found in the following passage: "This decisive preparation resulted from the spontaneous convergence of three general conceptions respectively formulated by Pascal, Leibnitz, and Condorcet. Although emanating exclusively from the development of science, the first was able adequately to characterize the total convergence of the past toward the present by assimilating collective evolution to individual development. The second completed the sketch of human progression by subordinating the future to the present. In the light of this double preamble, the third logically instituted the direct notion by conceiving of our species as a single people." [1]

Laffitte in a passage of his *First Philosophy*, comments upon this passage of Comte's and adds allusions to Montesquieu and Turgot. The aphorism of Pascal is this: "The whole succession of human beings, throughout the course of all the centuries, should be considered as the same man, ever living and constantly learning." The ideas of Leibnitz are condensed in the following aphorism: "The present is pregnant with the future." Montesquieu, although dominated mainly by the idea of concensus, of social solidarity, nevertheless contributed to the notion of social evolution by showing filiations in other social phenomena than those of mental development. But his studies were purely special, being limited in the one case to the history of Rome and in the other to the development of the feudal system. Turgot, on the other hand, under the double influence of catholicism and science, rose to a conception of an evolution which should embrace all aspects of the social organism, its continuity as well as its solidarity.

All these views Condorcet completed and developed in his *Progress of the Human Mind*.[2] This volume presents an historic picture of the development of man based upon "the successive observation of human societies at the different epochs through which they have passed." "These observations upon what man has been, upon what he is today, will ultimately lead to the means of assuring and accelerating the further progress that his nature permits him to hope for." In the ten epochs into which Condorcet divided the course of history, he traced the successive passage of mankind, in whatever place, from the hunting through the pastoral to the agricultural stage. Then, considering the Occidental peoples as the representatives of mankind in its advance, he brings his study of this movement down to the time of the French Revolution. His tenth epoch is the future, which he attempts to foresee in the light of the past. In this way, Condorcet put the problem of discovering the laws of the evolution of the human race, and accompanied it with a tentative solution. His effort, however, was but provisional. He failed to understand the importance of the Middle Age in the evolution of the Occident; and he was never even within reach of a division into their different classes of the phenomena the laws of which he was endeavoring to discover.[1] It was Comte who, utilizing all the work of his predecessors, finally solved the problem. Nevertheless, in Condorcet, the abstract conception of mankind as a whole traversing, in its different representatives, the successive degrees of social development took a form clear and precise.

---

[1] Pol. Pos., IV, p. 30; Eng. tr., IV, p. 27.

[2] Esquisse d'un Tableau historique des progrès de l'esprit humain, 1797.

In this way, with the aid of all his fore-runners, Comte began his sociological studies. At first, he changed nothing in the conception of mankind as a single people. This thought is the occasion of the following reflections in the forty-eighth chapter of the *Positive Philosophy:* "This rational fiction is much less remote from the reality than is customarily taken for granted; for, from the political point of view, the true successors of this or that people are those who, utilizing and continuing its efforts, have prolonged its social progress, whatever the territory they inhabit or even the race from which they spring." [2]

To this conception, Comte was to give greater and greater precision and generality. His biological studies had shown him that man,—i. e. the animal *Homo,*—is only one of numerous species of sociable animals; that many of these sociable species had reached a degree of organic evolution almost identical; and, finally, that collective development alone had been able to elevate, from among these sociable animals, the animal *Homo* to the human level, whence his domination over the other species. The most influential agent in this final result had been the transmission from one generation to the next of obtained results, social achievements, of an heritage, that is, of social progress. From this point of departure, Comte reached the conception of mankind as a single family, which, beginning at a given spot, spreads with time over the whole earth and at last brings the entire domain of knowledge within its control.

It was this profound conception that enabled Comte to rise from philosophy to religion. Religion, in the last analysis, is based upon the recognition of a power exterior to man. This power is the universally dominant influence of Humanity, that minds still in the theological stage had attributed to the gods. This change in the mind of Comte, placing Humanity above the existence of mankind, seems to date from the composition of the last chapter of his *General View of Positivism;* however this may be, the new conception was but the culminating point of certain advances already accomplished in his mind; and this conception, once reached, did not cease to evolve with perfect continuity toward a still higher degree of abstraction and precision.

The steps of this evolution can be followed from the end of the *Positive Philosophy* to the end of the *Positive Politics.* The first advance worthy of remark that took place in Comte's thought and modified his original conception of Humanity was determined by the realization of the fact that social improvement is accomplished to an unequal degree by different men and among different peoples. This modification is introduced into the general conception by Comte in the Introduction to the *Positive Politics:* "Humanity is not really composed of all individuals or human groups, past, present, or future, indifferently agglomerated. Since no true whole can result except from truly associable elements, the new Great Being is formed only by the coöperation in time or space of existences sufficiently assimilable, excluding those that were only a burden upon our species. . . . All its true elements then are necessarily honorable. They can, however, be combined only by their noble aspects, by setting aside from the memory of each, all the imperfections that urged them to discordance during their first [i. e. objective] life." [1]

---

[1] COURS DE PHILOSOPHIE PREMIÈRE, II, pp. 184-188.

[2] PHIL. POS., IV, p. 291.

The same thought is repeated further on in the same chapter. The abstract nature of this conception, which this volume aims to carry to its logical limit, is emphasized: "Abstract science alone could furnish the first general conception of Humanity. The tenderest empiricism stops at the consideration of the Family, and rises with real difficulty to that of Country, and even the latter was greatly restricted at first. However real the new Supreme Being may be, its collective nature needs many preliminary abstractions. Only the elements, simultaneous and successive, of this immense and eternal existence can be directly appreciated; and this appreciation must first be purified of the partial conflicts these elements present before the existence itself can be worthily comprehended. . . .

"This eminent difficulty . . . constitutes only the highest degree of the difficulty that is everywhere offered by the theoretical abstraction indispensable to the generality of our positive conceptions." [2]

And Comte goes on to show that this difficulty of abstraction augments in proportion as phenomena become less general and more dependent until it becomes almost impossible, in the superior sciences, to differentiate between the abstract data and the concrete data by an unaided and isolated study of the phenomena upon which the given science is founded. But, he continues, this task is rendered more easy by the fact that the higher sciences depend upon the lower; and, in consequence, the problem of analysis can be simplified by a preliminary sorting out and setting aside of all the phenomena belonging to the lower sciences. This dependence, he says, furnishes "a precious theoretical assistance, without which we could not sufficiently distinguish between the circumstances to be set aside and those to be conserved. Only in this way is it practicable, as regards the most eminent subjects, to constitute abstractions quite as positive as those of which mathematical speculations so easily allow the formation." [3]

The third chapter of the Introduction, devoted to the science of biology, brings a further refinement to the general conception: The various animal species are here conceived as of forming each a collective being. Among these collective beings, only one can be dominant; and so when the animal *Homo*, having become man, comes to dominate the other species, the collective development of the latter is practically arrested. Consequently, it is logical to speak of the passage from animality to sociality, i. e. humanity, since the human species is the organic form to which social development is, in fact, limited. An extension of the same idea leads to Comte's considering all the sociable species as leagued together against the domination of material necessities. Thus, when Man at last gains predominance it is possible to consider all the other species as acting under his direction. Consequently Comte speaks of an association between man and the disciplinable species. Developing this idea he reaches the thought that: "Although each nation tends to become the central nucleus of Humanity, one only is called to this destiny, to the exclusion of all others, which have to group themselves suitably around it." [1]

---

[1] Pol. Pos., I, p. 411; Eng. tr., I, p. 333.
[2] Pol. Pos., I, p. 429; Eng. tr., I, pp. 347-348.
[3] Pol. Pos., I, pp. 429-430; Eng. tr., I, p. 348.

All these diverse considerations concur to form the definition of Humanity found in the first chapter of the *Social Statics:* "The supreme power is the continuous resultant of all the forces susceptible of voluntary coöperation in the improvement of the universal order, without even excepting our worthy animal auxiliaries. Each one of these true elements is capable of two successive existences: one objective, always transient, in which it directly serves the Great Being in the light of all anterior preparations; the other subjective, by its nature perpetual, in which its service is indirectly prolonged by the results which it leaves to its successors." [2] It was a more thorough examination of the last of these two existences that led Comte to make a new restriction: "Not only is Humanity composed only of existences susceptible of assimilation, but of each of them only the incorporable part is admitted, after every individual discordance is forgotten." [3]

A still higher degree of abstraction is reached in the last chapter of the volume: "Abstract sociology conceives of the formation and the development of the true Great Being as coming from a single nucleus. In fact, the laws, both of existence and of evolution, must be substantially the same as regards all possible centers of this immense expansion. Whatever may be the center that finally becomes dominant, or whatever the manner in which the others finally group themselves around it, the fundamental conceptions of sociology can in no wise be affected thereby, as my eminent predecessor Condorcet logically foresaw. This double determination will become only an important application of true social science, but without sharing in its construction." [4]

In the *Social Dynamics*, no definition of Humanity is to be found comparable to those already given. There is, however, a significant sentence in the letter to Czar Nicholas, in the preface to the volume. Humanity is there said to be "the immense and eternal being spontaneously composed of all truly assimilable individualities." [5]

It is in the last volume of the *Positive Politics* that the definition of Humanity receives its fullest expression and its final form. "The Great Being is the whole of the beings, past, future, and present, who freely coöperate in making the order of the universe more perfect. Every sociable species tends by its nature towards such a convergence; but collective unity can be realized on each planet only by the preponderant race, whose common expansion necessarily prevents that of the lower animals. This is why the systematic definition of the composite being has no need to mention its specific nature. On the other hand, the spontaneity of the coöperation and its external destination are evidently indispensable for its consistency and its perpetuity. If, then, everything be set aside that can be supplied by implication without confusion, the definition of the Great Being can be limited to the following: *the continuous whole formed by all convergent beings*." [1]

---

[1] Pol. Pos., I, p. 630; Eng. tr., I, 509.
[2] Pol. Pos., II, p. 60; Eng. tr., II, p. 54.
[3] Pol. Pos., II, p. 62; Eng. tr., II, p. 55.
[4] Pol. Pos., II, p. 451; Eng. tr., II, p. 369.
[5] Pol. Pos., III, p. xxxii; Eng. tr., III, p. xxvii.

The constitution of the Great Being results from the combinations of elements, mediate or immediate. These are first families and then countries, but never individuals, who are only its agents or representatives. The animal *Homo* is not the exclusive agent in the constitution of Humanity. With him must be combined "all the races susceptible of adopting the device of superior souls: *Live for others.* Without such a complement, the positive synthesis could not sufficiently institute the continuous league of voluntary activities against modifiable necessities." [2] In the Great Being, all man's free animal auxiliaries are incorporated, while unworthy human parasites are set aside. To this height, then, had attained the simple conception of historical mankind that is found at the beginning of the social physics of the *Positive Philosophy.*

At the same time, despite the degree of abstraction reached in the definition just presented, it must be noticed that Comte is still speaking in terms of a super-organism, of a being, that is,—the most abstract being conceivable, no doubt, but a being all the same. In fact this final definition comes in the fourth volume of the *Positive Politics*, where Comte has avowedly passed from the abstract science of sociology, statical or dynamical, to the concrete anticipation of the normal state of mankind. In this respect, then, i. e. as regards an abstract sociology, the definition is a regression and not an advance. What sociology needs to become an abstract science is not an organism nor a super-organism as its object, but a phenomenon, a property. This need is not satisfied in the definition given by Comte.

So much is evident; nevertheless the definition contains the elements that are necessary to point the inquirer towards his goal. Thus, for example, Comte declares that the existences of which the Great Being is composed are combined only by their noble aspects, which alone are assimilable. The statement amounts to saying that the noble, i. e. the assimilable, elements are the phenomena of sociology. Again, Humanity is said to be the continuous resultant of the forces susceptible of voluntary coöperation. By these forces, then, beings live societally. Each element was declared to live subjectively by virtue of the results it leaves to its successors. Hence the results are the objects of interest to sociology. Finally, Humanity was said to be composed of the incorporable parts of assimilable existences; and so the process by which these parts are assimilated is the process that sociology has to study, for it is by the incorporation of these parts that Humanity lives. The Great Being is not only the continuous resultant of all assimilable forces; it is the sum total of all convergent results. The process by which these results converge, the process of continuous assimilation of incorporable forces, is the process by which the life of the Great Being is maintained.

---

[1] Pol. Pos., IV, p. 30; Eng. tr., IV, p. 27. (Comte's italics).

[2] Pol. Pos., IV, p. 37; Eng. tr., IV, p. 33. (Comte's italics).

In the light of these statements, a higher degree of abstraction can be attained, one that will carry the analysis of the sociological fact further than it is carried by Comte. Humanity is not only the continuous whole formed by all convergent beings: it is the continuous resultant of all assimilable forces, the sum of all convergent results. The process by which all these results converge, the process by which is operated the continuous assimilation of incorporable forces is the process that maintains the existence of the Great Being. Sociology, in consequence, thus reaches the point where it can abandon the study of social beings in order to devote itself to the study of the life of social beings; it now deals not with super-organisms but with the life of super-organisms, precisely as biology ceased to be the study of all the various living organisms and became the study of their life in the abstract sense.

At this point, the argument meets a line of reasoning that has hitherto merely been alluded to. Sociology, it has often been said, is the science of society. Is there a relation between this definition and those already given? A brief return to the definition of biology will show that there is a direct relation between them. Biology was originally understood to be the study of all beings enjoying life. But the study of such beings—organisms, that is—was found not to exhaust the modes of living. Above organisms came super-organisms, whose mode of living was not vital but social. It is to these super-organisms that the name societies is given. Hence biology is concerned with the *vitality* manifested by organisms, and sociology with the *sociality* manifested by super-organisms or societies. The widest, the most universal, the most abstract society conceivable is that formed by all convergent beings. Hence when sociology is defined as the study of Humanity, it is in fact being defined as the study of society in the abstract. The two definitions while not identical are equivalent.

Furthermore, societies become possible only by virtue of convergent results; by the transmission, that is, from one generation to another of incorporable products. It is by these products that men are able to join their forces and work together. It is not sufficient, for this coöperation to be produced, that organic evolution should reach the point where sociable,—i e. able to be social,—animals appear. The mere instinct to associate does not suffice; it is only the biological pre-requisite for the appearance of societies. There must be the possibility of agreement, of common understanding, whence may arise a common purpose and concerted action, however primitive, before society exists. Consequently, the life of societies is dependent upon the formation of the incorporable results, the assimilable forces, already discussed. In this sense, then, the life of Humanity and the formation of societies are again but different aspects of the same fundamental fact. In short, the definitions of sociology as the science of society and as the study of the Great Being, Humanity, are at bottom the same, and differ only in that the second definition is limited to the most abstract conceivable of all societies, i. e. the society in the constitution of which the animal *Homo* has been the principal agent.

At this point, a new conception begins to take form as the result of the previous discussion. A comparison with the slowly matured definition of biology will give this new thought greater precision. This conception, as will be seen, is entirely analogous to that reached in biology when that science ceased to be the concrete study of all living organisms and was transformed into the abstract science of vitality as it is manifested in all the beings that enjoy it; when it ceased to study all living beings in all their aspects and began the study of the abstract phenomena of life; when it took its place in the abstract hierarchy and took as its domain the study of the vital process, the process of continuous renewal of substance. Sociology, in precisely the same fashion, now ceases to be the concrete study of super-organisms and is transformed into the abstract science of sociality as it is manifested in all the beings that are endowed with it. It ceases to study societies in all their aspects and begins the study of the phenomena of their life. It becomes the science of the societal mode of being, the second of the modes of living; it enters into the abstract hierarchy and takes as its domain the societal process, the process of the incorporation of assimilable forces.

In this way, then, is reached the central point of the present chapter: What is the societal fact comparable to the vital fact? If biology studies the phenomenon of the continuous renewal of material substance, what are the phenomena that are studied by sociology? The path that must be followed is already indicated: the phenomenon of the incorporation of assimilable forces constitutes the sociological fact. To give greater precision to the meaning of this process, to define it more exactly, to render it more comprehensible, to give the objective definition of sociology so needed for the logical organization of the entire domain of Psychics: such is the purpose of the section immediately to follow.

What should be understood by the societal fact? What is the sociological phenomenon? the societal process? The preceding analysis of the conceptions of Comte answers these questions in a considerable measure; but a still greater degree of precision is necessary, a still further advance must be made in order to make possible an application of the general philosophical principle that decrees that abstract sciences must deal only with 'events,' i. e. phenomena, and not with beings. Thus only can a satisfactory definition be obtained. The work of Sumner,[1] developed totally without reference to that of Comte, and independent as well of all contemporary schools of sociology, will be an invaluable aid in the accomplishment of the task.

---

[1] The passage which follows—pp. 91-94, closely follows the first two chapters of FOLKWAYS.

Despite certain analogies with other sociological theories, the work of Sumner has a special value, namely: the methodical exposition of the mechanism of the societal process: folkways, mores, institutions, laws, principles, philosophies.

The volume in which Sumner's views are set forth is entitled *Folkways.*[1] In this volume, sociological phenomena are reduced to a highly abstract form; though not completely abstract, as will be seen, they are yet the lowest terms to which the societal fact has hitherto been carried. In Sumner's work, says Professor Keller, "the reader has before him the conception of a stage of societal development lying beyond the purely organic stage, while plainly allied to it in most essentials; and yet falling short of the stage of societal development characterized by compact institutions and a conscious policy." [2] In his conceptions Sumner has made the most important advance in sociological theory since Comte: he has pushed the analysis of social life back to the point where human activities merge into the activities of the animal; to the stage where the animal *Homo* comes into direct relationship with the social being Man.

What, then, is this important conception? What are these basic sociological phenomena? Sumner gave them the name 'folkways' and stated his main thesis as follows: "The thesis which is expounded in these chapters is that the folkways are habits of the individual and customs of the society which arise from the efforts to satisfy needs; they are intertwined with goblinism and demonism and primitive notions of luck and so they win traditional authority. Then they become regulative for succeeding generations and take on the character of a social force. They arise no one knows whence or how. They grow as if by the play of internal life energy. They can be modified, but only to a limited extent by the purposeful efforts of man. In time, they lose their power, decline, and die, or are transformed. While they are in vigor, they very largely control individuals and social undertakings and they produce and nourish ideas of world philosophy and life policy. Yet they are not organic or material. They belong to a super-organic system of relations, conventions, and institutional arrangements. The study of them is called for by their *social* character, by virtue of which they are leading factors in the science of society."

This statement needs analysis and expansion to reveal all its implications. First, then, how do phenomena of such importance arise? "The first task of man is to live.. . . . Every moment brings necessities which must be satisfied at once. Need was the first experience and it was followed by a blundering effort to satisfy it. . . . Thus ways of doing things were selected which were expedient. They answered the purpose better than other ways or with less toil and pain. Along the course on which efforts were compelled to go, habit, routine, and skill were developed. The struggle to maintain existence was carried not individually but in groups. Each profited by the experience of the other; hence there was concurrence towards that which proved to be the most expedient.

---

[1] FOLKWAYS: A STUDY OF THE SOCIOLOGICAL IMPORTANCE OF USAGES, MANNERS, MORES, AND MORALS. Ginn and Company, Boston, 1907.

[2] A. G. Keller, SOCIETAL EVOLUTION. Macmillan, New York, 1915. Page 38.

All at last adopted the same way for the same purpose; hence the ways turned into customs and became mass phenomena. Instincts were developed in connection with them. In this way, folkways arise." The operation consists, then, in the frequent repetition of petty daily acts, often by great numbers in concert, or at least acting in the same way when face to face with the same needs. The process is as actively in progress now as it was at the earliest dawn of history.

At first, each act stood alone and looked no further than the immediate satisfaction of a want. Needs recurring, acts were repeated and habits arose, out of which came customs for the group; yet such consequences were neither foreseen nor intended. In fact, their existence is often entirely unnoticed and their import not comprehended. It is long before they reach the stage in which they can be used to guide action for the future. In this sense, "the folkways are not creations of human purpose and wit. They are like products of natural forces which men unconsciously set in operation, or they are like the instinctive ways of animals." Developed by experience, they are adapted to an interest, and are handed down with no exceptions or variations. Thus when changes do occur, as is often of necessity the case, they are the result of unconscious and unintended alterations.

It is probable, continues Sumner, that man receives from his beast ancestors certain psycho-physical traits or instincts or predispositions. These undoubtedly gave men suggestions in solving such problems as the food-supply, and from these solutions result the phenomena of the group, currents of similarity, concurrence, mutual aid, and the sum total of these actions produces folkways. The process goes on all the time, yet it is very difficult to analyze. There seems to be a 'mind' in the crowd, which differs from the minds of the component individuals. It is really unnecessary, however, to have recourse to such an explanation. The constant coöperation and suggestion of a crowd brings out new ideas, concentrates scattered suggestions, criticizes, verifies, and corrects what is taken up, thus eliminating error and making valuable combinations. Thus, once more, folkways arise, exhibiting themselves in the light of phenomena produced by individuals under the prompting of predispositions inherited from pre-human ancestors and submitted to the conscious or unconscious criticism, correction, and perfection of the various members of the group until the final result ceases to be the product of individuals but is the product of the social being, the group, and in turn plays its part in transforming the individual into a social product.

Presently, however, a time is reached when the folkways come to involve judgments as to societal welfare, and exert a coercion on the individuals to conform to them, even though they are not coördinated nor enforced by any authority. The moment such a point is reached, the folkways become mores and a higher stage in the societal process is begun. Sumner defines this stage as follows: "Men in groups are under life conditions; they have needs which are similar under that stage of life conditions; the relations of needs to the conditions are interests under the heads of hunger, vanity, love and fear; efforts of numbers at the same time to satisfy interests produce mass phenomena which are folkways by virtue of uniformity, repetition and wide concurrence. The folkways are attended by pleasure or pain according as they are well fitted for their purpose. Pain forces reflection and observation of some relation between acts and welfare. At this point, the prevailing world philosophy (beginning with goblinism) suggests explanations and inferences, which become entangled with judgments of expediency. However, the folkways take on a philosophy of right living and a life policy for welfare. Then they become mores and they may be developed by inferences from the philosophy or the rules in the endeavor to satisfy needs without pain. Hence they undergo improvement and are made consistent with each other." "We must conceive of the mores as a vast system of usages covering the whole of life and serving all its interests; also containing in themselves their own justification by tradition and use and wont, and approved by mystic sanction until by rational reflection they develop their own philosophical and ethical generalizations which are elevated into 'principles' of truth and right. They coerce and restrict the new born generation. They do not stimulate to thought but to the contrary. The thinking is already done, and is embodied in the mores. They never contain any provision for their own amendment. They are not questions but answers to the problems of life."

At the next step in advance in social development are found institutions. "An institution consists of a concept (idea, notion, doctrine, interest) and a structure. The structure is frame-work or apparatus. . . . The structure holds the concept and furnishes instrumental activities for bringing it into the world of facts and action in a way to serve the interests of men in society." At this stage, acts of legislation, too, develop out of the mores. Societal regulations are first customs and then taboos. Positive laws follow only when the stage of verification, reflection, and criticism, already referred to, is reached; when a sort of social invention is devised by which to realize the definite purpose of the group. Out of the mores, in fact, come all the valuable advancements of a group, for the mores form a vast system of usages, covering the whole of life, and serving all its interests, containing their own justification by virtue of tradition and the mystic sanction that surrounds them. Ultimately, they develop a rational system of philosophical and ethical generalizations which are elevated into the rank of truth and right.

The whole theory can be summed up as follows: "The proposition here to be maintained is that the folkways are the widest, most fundamental, and most important operation by which the interests of men in groups are served, and that the process by which folkways are made is the chief one to which elementary societal or group phenomena are due. The life of society consists in making folkways and applying them. The science of society might be construed as the study of them. The relations of men to each other when they are carrying on the struggle for existence near each other consists in mutual reactions (antagonisms, rivalries, alliances, coercions, and coöperations) from which result societal concatenations and concretions, that is, more or less fixed positions of individuals or subgroups toward each other and more or less established sequences and methods of interaction between them, by which the interests of all members of the group are served."

It will be well to carry the process one step farther before subjecting the whole theory to a final analysis. The societal concretions just referred to arise, as do all societal combinations, from the folkways. Men struggling each to carry on an existence unconsciously coöperate to build up associations, organizations, customs, and institutions. Presently the results of their actions take shape, are fully grown and actual, though no one ever intended or planned them in advance. Their mysterious and overpowering influence upon the individual is attributed to 'ancestors' or to higher powers.[1] Along with concretions of acts, go concretions of thoughts. War, labor, religion, amusements, family life, and civil institutions,—each of these great groups of activities is attended by doctrines of philosophy, more or less crude, beginning with myth and folklore; by faith in its various manifestations; by precepts of right conduct and duty beginning with the primitive taboo.

It matters not that each man is infinitely unimportant to the group: it is not the man that makes the concretion: it is his act. The man may die; the act lives on. Whether he realizes it or not—and in the majority of cases he does not—every act of every man fixes an atom in a structure, fulfilling a duty derived from what preceded, and conditioning what is to come after, by the authority of traditional custom. As the results of this process become clear, another influence begins to show itself and to exert its power. This influence is, in Sumner's phrase, "a strain towards consistency," i. e. an attempt on the part of the members of the group to bring into logical relation the varying inductions and deductions that experience in any given case approves. This strain is the result mainly of conscious effort, but again it is not an individual result. It is the same process as that already twice described, now operating on a higher and more difficult level. By this strain toward consistency are ultimately produced continuity and coherence, deserving in the last analysis to be characterized by the word 'structure' on account of the fabric of relations and prescribed positions with which societal functions are permanently connected.

Thus, in conclusion, the process of making folkways is never superceded or changed. It goes on today just as it did at the beginning. Use and wont exert their force on all men always. They produce familiarity, and mass acts become unconscious. "The range of societal activity may be greatly enlarged; interests may be extended and multiplied; the materials by which needs can be supplied may become far more numerous; the process of societal coöperation may become more complicated, and contract or artifice may take the place of custom for many interests; but if the case is one which touches the ways or interests of the masses, folkways will develop on and around it by the same process as that which has been described as taking place from the beginning of history." The structures thus built up are not biological or physical, but institutional and societal; they belong therefore to a category that must be defined and studied by itself.

---

[1] It was of course this influence upon the individual that Comte discovered, and in which he saw the external power upon which a positive religion must be based; it is this influence to which he refers when he says, for example, that Humanity is man's real Providence.

In all the preceding discussion, whoever the man of science concerned as the author, there is a common element. These thinkers, whatever their point of departure or their immediate purpose, have envisaged the phenomena of sociology in a more and more abstract fashion. In the preceding chapter, the movement of Comte's mind as it evolved towards a final definition of sociology has been followed. At each advance in his thought, a closer approach to an objective statement is to be observed. In the present chapter, successive definitions of Humanity reveal a corresponding development in his conception of the elements of which the Great Being is composed. All these lines of thought converge towards a definition of the process by which societies live. The details of this process are clearly conceived by Sumner. It remains only to effect a fusion of the conceptions of the two thinkers, Comte and Sumner, to provide a solid basis for the construction of an objective definition of sociology.

This fusion is indispensable. What is desired is a definition of the object of sociology, of those primordial phenomena upon which depends the social life of collective beings. The definition sought must reveal the essential nature of the social mode of being, above and beyond the vital mode. The main lines of the solution are already apparent. Collective existence becomes possible when biological organisms reach the point of organic evolution where sociability is instinctive. But sociability alone does not determine collective life; it is only the condition for it. Social life begins only when the efforts of individuals can be united upon a common basis of belief and of act. As Laffitte said: "Without a mass of common conceptions, the relations between men must be restricted." [1] And it is the function of the societal process, as it is described by Comte and Sumner, to furnish this common basis.

For Comte, this common basis is the sum of the results of individual existences. It is by the addition of the assimilable forces capable of being incorporated in a growing body of collective resources that social existence is rendered possible. But Comte did not consider closely the process by which these results, these forces, arise. At this point, then, Sumner's conception comes into immediate relation with Comte's and supplements it. According to Sumner, the societal process is a continuous coöperation of individuals in which the individual is lost from sight and only his acts, his achievements,[2] remain. These are taken up by others, corrected, amplified, and adopted as the basis of their own actions, which in turn are subjected to the same purifying process and are incorporated into the common possessions of the group. Thus, then, the process of incorporation becomes the essential center of interest; and all that is needed to bring the definition of sociology into strict parallelism with that of biology is a definition of the elemental nature of the process.

The method to be employed in obtaining this final result has already been indicated. It consists in a revision of the conceptions of Comte and

---

[1] COURS DE PHILOSOPHIE PREMIÈRE, I, p. 55.

[2] The word is Lester Ward's,—who was also, in his own way, approaching the conception of the text.

Sumner in the light of the fundamental principles on which rest the abstract sciences. Sociology must become an abstract science: then it must deal with a specific and irreducible phenomenon, a property, a quality, an attribute, a mode of being. This phenomenon, being abstract, must not be peculiar to this or that particular existence, it must be common to all the members of a comprehensive group, that is, it must be studied in all the beings that manifest it. It must be general, that is, it must apply to all cases of societal groupings. It must be irreducible, that is, it must not be analyzable into a combination of any or all the phenomena proper to the other abstract sciences. It must be completely detached from any dependence upon the data of the sciences above it or below it in the hierarchy. The definition of this phenomenon must not be an attempt to explain society—the definition of life is not an explanation of it—it must seek only to reduce the life of societies to a single fact, a fact applicable to all societies observable.

The theory of Comte, completed by that of Sumner, and examined in the light of the general principles of the positive philosophy already set forth, will furnish a solid basis for the definition that is to be constructed. But certain preliminary modifications will be necessary. For example, the two theories are as they stand somewhat too concrete. The theory of Sumner is particularly open to this objection. Sumner constantly speaks, not of an attribute, a mode of being, but of a particular type of activity with a special result. His language implies that society is an exclusively human manifestation; or, better, that there is a difference in kind between human and animal societies. He never reaches the position that there may be, so to speak, animal folkways; that human folkways are the same phenomena as those manifested by beings whose biological organization differs from that of man. This narrowness of conception is not found in Comte's theory, which incorporates the disciplinable animals into the universal organism, Humanity. On the other hand, the two theories embrace the history of all times and places, and are in no need of correction from this point of view.

Both theories are particularly praiseworthy in that they deal with phonemena which are no more dependent upon biological facts than the latter are upon cosmological facts. The two philosophers emphasize the specificity of the phenomena with which they deal. These phenomena are, in Sumner's phrase, "neither biological nor physical, but societal and institutional," and compose, in consequence, a category that must be studied by itself. One weakness, however, should be noted: Comte, and particularly, Sumner consider as synonymous the terms 'biological' and 'animal' on the one hand, and the terms 'social' and 'human' on the other. They contrast, that is, the social or human with the biological and animal. These defects, and others not worth the mentioning, are of no fundamental importance; and the two theories of Comte and Sumner, once revized and enlarged, will constitute a solid foundation for the construction of the desired definition.

What, then, are the indispensable modifications?

In the first place, the conceptions of Comte and Sumner must be made more abstract, since only entirely abstract phenomena can serve as the basis of the definition sought. These phenomena must be only the varied aspects of a single mode of being. They must be nothing but 'events'; consequently, they will not have any relation to individuals, to societies, to beings, to concrete existences. Here, indeed, is the final justification for the assertion that the problem of the relations between individual and society does not exist for sociology as an abstract science. The individual is a composite of phenomena; society is also a composite of phenomena; from this point of view, one is the function of the other. It is no more possible to separate them than it is to study the formation of mountains without at the same time studying the formation of valleys. The opposition between individual and society raises a debate without issue. This difficulty is entirely removed by the new conception of sociology. The problem is no longer that of determining whether the individual makes society or whether society determines the individual. The new formulation of the question is this: What is the sociological fact, the societal mode of being? Notice once more the problem of abstract biology: The latter demands: What is the attribute of vitality? What is the vital fact at the basis of biological phenomena? What is the element common to all living organisms? Sociology should demand: What is the attribute of sociality? What is the societal fact at the base of sociological phenomena? What is the element common to all superorganisms, to all collective beings? Hence the conceptions of Comte and Sumner can be made of service in the solution of the problem only by being widened to the point where all thought of individual or of society is lost from view, the point where they will be applicable to all possible cases of societal existence.

In the second place, these conceptions must be freed from any connection with any type or race of beings. The societal mode of living is common to numerous species of higher animals, all of whom manifest the societal attribute to a greater or smaller degree. There is no warrant whatever for confining it to man alone. Societal existence merely rises to its highest degree of perfection in this particular species of biological organism. It is here in fact, that man obtains the supremacy on which he has so long prided himself. In other words, man is not, biologically, at the head of the animal scale. The process of continuous renewal of material substance is effected in a myriad of forms. The human organization is, by its imperfections as well as by its advantages, the one best fitted to live societally. No one thinks of making vitality the exclusive possession of man. Why then make sociality an exclusively human possession? In other terms, an 'animal' sociology, distinct in nature from human sociology, does not exist. There is no fundamental distinction between the two. The two types of sociality are identical up to a certain point; one goes further along the same road than the other; that is all. To use the language of Sumner, all sociable species produce folkways; only in the animal *Homo* do they become mores. Consequently, the conceptions under discussion must be extended to cover all animals capable of sociability.

In the third place, the phenomena of sociality must be as independent of the circumstances of time or place as are the phenomena of vitality or any other abstract phenomena. The science of sociology must seek the materials for its inductions in whatever time or place animals endowed with the instinct of association exist. On this point, the conceptions summarized have to be extended mainly in the direction of the past. Already they cover all historical periods as well as the prehistoric eras; but they should, in theory, comprehend also the long forgotten epochs in which the first societal phenomena were manifested. They must, therefore, comprise the sociable animals of geological time on the one hand and of the farthest limits of the future on the other. Vitality has its pre-biological conditions; sociality, in the same way, has its pre-sociological conditions. Once the latter are recognized, the time period in which sociological phenomena are to be sought has begun.

Finally, sociological phenomena, once found, must not be reducible to any combination of abstract phenomena. A fact, resulting from the combination of several properties, an aggregate even of but two attributes, has no place in the material of the abstract sciences. Disorder only can result from such a defect of analysis, for then methods appropriate to one type of science would be employed for the solution of the problems proper to another type. It was precisely this conflict that occurred when Comte, at the beginning of his career, regarded the social fact as irreducible. It was not so in fact; the social fact is an aggregate of two properties, the collective or societal and the individual or moral; and the discovery cost him thirty years of labor. In other terms, the phenomenon of sociality must be specific. The theories under criticism leave little to be desired from this point of view. Comte, in his *Social Dynamics*, had reached the point from which he had seen the necessity of establishing a separation between results and intentions; and Sumner deals exclusively with the first. The two sociologists understood clearly that there is a distinct cleavage between sociological phenomena and biological, and *a fortiori* cosmological, phenomena. Comte had even attained the height of a conception of phenomena above the sociological. Each of the two philosophers, in short, had gained an insight into the essential nature of a new fact.

What, more precisely, is the specific nature of this new fact? Two men, for example, meet. Each has led his own life; each has had his own experiences; each has made his own inductions from them. They exchange these experiences and inductions. Each finds in the other's knowledge the key to some difficulty of his own. They part; and each, by virtue of this interchange, becomes a new being, capable of wholly new achievements. Yet the most delicate biological analysis imaginable would be unable to account for these new achievements. The men have not been changed biologically; but they have been transformed sociologically, as Thales would have been could he have met Euclid.

The time is now come to approach directly the task of defining the sociological fact on which is to be based the definition of sociology as an abstract science. The point of departure is given by the theories of Comte and Sumner. The philosophical conditions already set forth will serve as guide.

The first indispensable element of each societal phenomenon is a convergence of efforts. The isolated individual, whatever his genius or learning, is of no societal significance so long as his isolation continues. Robinson Crusoe, on his deserted isle, has no sociological meaning. Sociology enters only with the appearance of Friday. If society is to come into being, individuals must be gathered together; otherwise constant interchange of results can never be effected, and there can be no mutual improvement. It is true, as Comte pointed out, that a single organism can improve upon its own previous efforts and so create a condition that constantly ameliorates; but unless these ameliorations are transmitted to others they die with the individual and are lost forever. Thus the magpie that can count three,[1] and that transmits the result to its companions, is of greater importance sociologically than the savant who, engrossed in knowledge 'for its own sake,' should pass his life in the solitude of his library or laboratory without ever acquainting his fellowmen with the results of his researches. The magpie, moreover, is important from another point of view, for it presents to observation the sociological fact in its elementary form. It is not in the complex ratiocinations of the scientist that the fundamental phenomenon is most easily to be found; it is to be discovered in the groping and imperfect efforts of animals, just exactly as the elementary biological fact is revealed more clearly in the vegetal than in the animal organism. It is on such humble beginnings, such imperfect foundations, that are raised the imposing edifices of Science.

Here, then, is the first distinctive character of the societal fact: its essentially *collective* nature. The members of one or another species, possessing the requisite biological endowments, find themselves in the presence of the multiple problems that living entails. These problems they solve first individually, as far as their personal powers permit, then as groups or combinations of individuals. Hence the complexity of efforts and results that are combined, contrasted, compared, corrected, and expanded. The collective result obtained is not due to the individuals separately, but to the group, to the collective being, to the society. It is not even necessary that the individuals should belong to the same species, as the age-long association between *Homo*, *Canis* and *Equus* demonstrates. Here indeed is the most complete illustration of the fact that in the societal process the individual is completely lost from sight as such, and that what is important is the result. The result is everything, the agent nothing. In other terms, and to summarize the thought, the phenomenon is at this stage completely abstract; it must now be thought of as an attribute, a mode of being. It is, in short, the societal aspect of 'living.' The sociological process operates as a sort of multiplication, whereas the biological process results rather from an addition. The sociological agent is the biological organism multiplied by the constantly increasing factor that represents the combined efforts of all coöperating forces. The societal influence is the exponent which raises the biological figure to a higher power. Two men working together are not $1+1$, but $1x$, and the x is the attribute studied by sociology. In this sociological process, the agents disappear, the results live on. Hence the first characteristic of the societal fact: its collective nature.

---

[1] "Animals count, that is certain." Leroy, LETTRES SUR LES ANIMAUX, 5° ed., Vigot Frères, Paris, 1896, p. 123.

"Ingenious experiments have demonstrated that with the animals distinct numeration ceases beyond three. But it would be vain to try to attribute to our species a more comprehensive privilege, which is the result only of the social assistance of signs, without which we are as incapable as the animals of counting above this universal limit. Besides, it is necessary, in both cases, to have regard only for abstract coexistence, always confused after three, whereas concrete coexistence can be appreciated by man and animals in an exact fashion, the objects in this case dispensing with words." POL. POS., III, p. 129; Eng. tr., III, p. 107.

But this collective nature of the societal fact, of the sociological phenomenon, is only one of its essential characters. There is another, of equal importance. Where a number of individuals work together, entirely new results may arise from their coöperation; but if these results are not carried beyond the place where the particular group is assembled, their rôle in the development of sociality will not be notable. A Robinson Crusoe group is sociologically almost as valueless as a Robinson Crusoe himself. In other words, a collective result is no more a sociological phenomenon than a crystal is a living organism. Results must be carried beyond the bounds of the group and be combined with the results of analogous associations before sociality can with truth be said to arise. In still other words, the societal process is not only a question of place but a question of time as well. This new aspect of the societal fact emphasizes the abstract nature even more strongly than does the first aspect. A single collective result is nothing. If all the organisms of Earth were to coöperate for a single purpose, and to separate immediately thereafter, each resuming his individual existence, no sociological event would have been produced. If the succeeding generation were to coöperate in a similar fashion, it would have to begin at the same starting-point as the first. It is only when the result of a first grouping becomes the starting-point of a second that the societal process in reality begins. The societal fact, as has been seen, is collective; now it is seen also to be *cumulative*. These two characteristice definitely constitute its essentially, its totally, abstract nature, and make it, therefore, the basis for a new abstract science.

In the last analysis, then, once every suggestion of being or existence, individual or group, has been put aside, the basic societal phenomenon is a continuous process, consisting in the transmission of collective results obtained by the temporary or permanent coöperation of a grouping of organisms to another, later or different, grouping. These results are not attributable to one or another member of the group, though doubtless some members will have a greater share in producing them than will others; the group is the true source of them. The various groupings may consist of members of the same or of different species; the coöperation may be conscious or unintended, voluntary or forced, amicable or hostile—these considerations are not fundamental. The result alone is important. Just as the vital process is manifest in an infinity of forms, so the societal process can be observed in the most ephemeral groups of primitive sociable organisms as well as in the most stable associations of the most highly individualized organisms. Instead of a single family, ever living and learning, and finally covering the globe, the investigator has now before him a single process carried on in the most varied conditions. Nevertheless, it may be conceived of as having begun at a certain point in space and time, and as continuing until its results embrace all terrestial time and space—and more, if the inhabitants of the other planets should ever come to communicate with their neighbors of Earth.

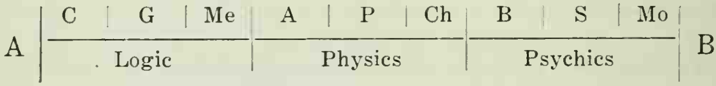
The nature and the elements of the sociological fact are at last clear. In consequence, a basis exists for the definition of sociology as an abstract science. Just as biology was defined on the basis of a definition of life—i. e. of the vital attribute—so sociology can be defined on the basis of the definition of society—i. e. of the societal attribute. The first characteristic of societal phenomena is their collective nature; the second is their cumulative nature, for the results of group action combine. In both cases, individuals, even when they can be identified, have no importance. *The societal fact*, and in consequence the abstract phenomenon of sociality, *is a collective cumulation.* Society, in the abstract sense, begins when collective cumulations appear; just as life, in the abstract sense, begins when the continuous renewal of substance is produced. Just as biology is the science that studies the process of this renewal of substance in all the organisms in which it takes place, so sociology is the science that studies the process by virtue of which collective results are cumulated in all the beings where it occurs, i. e. in super-organisms, collective beings, societies. Just as biology ceased to be the study of living organisms and became the science of the vital phenomenon, so sociology now ceases to be the study of collective beings, of super-organisms, of the Great Being, of Humanity, of society in general, and becomes the science of the societal phenomenon, of the process of collective cumulation.

In conclusion, then, the definition just given meets the requirements for the construction of a purely abstract science. By its terms, the sociologist is freed from all obligation to consider any concrete question whatever. His thought is relieved from the necessity to deal with any time or place, people or country, institution or legislation. These questions, in fact, have ceased to exist for him, precisely as questions of industrial application do not exist for the chemist. Individual and society are definitively excluded from his domain. Each has its societal aspect; but it is the phenomenon of sociality and not the concrete being that is his concern. His intellect is no longer embarrassed by the need to keep in mind phenomena belonging to different classes. The categories above and below that of sociology are outside his jurisdiction. Cosmological, vital, and moral phenomena have each their clearly marked place; they must be studied in their relation to societal facts when problems of politics are in question; but each class must be dealt with beforehand in and for itself, without regard for extraneous considerations of whatever kind.

For this special study, the completely abstract nature of the societal process furnishes the calm so necessary to the mind of the investigator, the calm so difficult to maintain in political discussion. Concrete questions invariably bring with them disturbances of feeling, for they are always associated with certain peoples, certain institutions, certain societies. Abstract thought avoids these pitfalls. It is the product of the meditative faculties, the exercise of which does not give immediate rise to images. The latter, so potent in stimulating the feelings, are created by the faculties of contemplation. The inductive faculty passes these images in review, retains only their common elements, and so diminishes or destroys their activating power. These inductions, then, constitute the materials upon which is exercised the faculty of coördination; and so once more are weakened the elements that are so destructive of the tranquillity and the neutrality of the intellect. Hence the 'pure' thought of the sociologist, the philosopher, the scientist. Even so, the feelings are not entirely unaffected, for the sympathies, whose organs are contiguous with those of the meditative faculties, can not fail to share in the excitement of the latter; but their influence, when the thought is abstract, can not fail to be beneficial, for they lend their energy to sustain the faculties of meditation in an elaboration which finally is not for personal ends but for the good of others.[1]

The preceding paragraph raises a question the consideration of which will bring this chapter to a close. Is the societal fact as it has just been defined an objective fact?

The question must be answered in the affirmative. From one end of the scale of the sciences to the other, there is to be observed a constantly decreasing separation between the objective and the subjective. The figure below will make more clear the course of reasoning at this point:



The line AB represents the encyclopedia of the sciences, with its three main divisions, Logic or Mathematics, Physics, and Psychics, each with its three subdivisions.

---

[1] "It is only in the proportion that man, without being a pure intelligence, succeeds in conducting himself *as if* his thought was not subject to the disturbances of feeling nor capable of arbitrary decisions that science and truth can exist." Goblot, TRAITÉ DE LOGIQUE, Colin, Paris, 1918, p. 369. (Italics in the original text).

These words, in so far as they demonstrate the impossibility of absolute truth and thus aid in demonstrating the relativity of all science, are praiseworthy, but in so far as they imply an ideal for the intellect, they must be corrected. The ideal they set up in a pure negation of the conditions inherent in the organization of man; it will for ever be an impossibility. On the contrary, the positive ideal, based on a scientific knowledge of human nature, is this: Man should always think under the inspiration of the noblest, the most elevated, feelings of his individuality.

A compass whose points are placed respectively at the points A and B will represent the domain of scientific investigation open to man. The point B is the point of perfect subjectivity, representing man considered in his highest reality, his fundamental individuality. Science, the study of the phenomena observable by man, is made by man, for man, and with human means. For beings endowed with other senses than man's and other faculties, Science would be a different thing from what it is. Human science is centered around human capacity and individuality. The point B of the compass is therefore fixed. The other point, A, traverses the field of knowledge in the order indicated in chapter three. That is to say, it advances from the simplest notions, the most evident inductions, to the study of the most complicated phenomena, those of human individuality. The movement of the point A, then, represents the course of scientific investigation. Starting from the most obvious objective statements, the mathematical, it reduces more and more, as the points draw together, the distance which separates the objectivity of A from the subjectivity of B. The final term, i. e. the highest degree of science, will be that in which the two points coincide at B.

Suppose for a moment that the line AB has been traced upon the arm, and that the points of the compass have been placed one at A and the other at B. The result will of course be two distinct sensations. If then the point A, representing the objective, be drawn toward the point B, representing the subjective, the moment will arrive at which the points are so close together as to give but a single sensation, and that before they have actually coincided at B. The impression at this moment is misleading, and causes the experimenter to believe that the points have met, when in fact they have not.

A misapprehension exactly analogous occurred for Auguste Comte in his philosophical development. At one point in his career, he grouped two specific phenomena, the collective and the individual, together under the single head of social. He was so near the purely subjective, in fact, that he was unaware of the fact that he had not really reached it. His institution of the science of morals corrected the error. In fact, therefore, sociological phenomena are objective. Collective cumulations exist outside the individual, although they operate upon him in a more intimate fashion than do any of the other phenomena of the scientific hierarchy. Yet they are as essentially independent of the basic elements of the individuality as are the phenomena of physics or chemistry. In short, the societal fact, though psychic, is none the less objective.

Comte, as everyone knows, established two main divisions in the science of sociology: statics and dynamics. His example has in the main been followed by subsequent investigators in the field of sociological science. It is therefore imperative to ask, before going further, whether the time-honored distinctions continue to apply, once the definition of sociology has become completely abstract.

The answer to this question is here distinctly in the affirmative: the division into statics and dynamics is even more applicable to the new definition than to the old ones, and the defense of this position is contained in the first part of chapter six.

Moreover, Comte in his original discussion of statics in the *Positive Politics* went further and subdivided his treatment of the subject into several main parts. The remainder of this chapter analyzes these parts in order to discover how much of them can be retained under the new order. The result is a division of the statical domain of sociology into four fundamental sections.

In conclusion, the chapter shows how this new analysis is supported by Comte's own views as expressed in the last revision he made of his sociological labors as a whole.

CHAPTER VI.

Societal Statics

SOCIOLOGY, from its very foundation, in the form of social physics, has been divided into two main divisions: statics and dynamics. This distinction Comte found in mechanics, and he applied it systematically to both biology and sociology. The bearing of the distinction upon the science of biology is not here in point and will not be discussed; but the consideration of the matter in regard to sociology cannot be omitted. There will be no attempt to exhaust the discussion, even as regards the work of Comte; all that is here to be done is to state the general principles of statics and dynamics as established by Comte, show how they must be modified to meet the conditions of the new definition of sociology, and outline the main sections of each of these fundamental divisions of sociological science.

In pursuance, then, of the first of these tasks, this chapter must begin with Comte's original presentation of the two fundamental divisions of sociology when it was still social physics. This presentation is to be found in the fourth volume of the *Positive Philosophy*, lecture forty-eight. Comte, in this place, shows that social phenomena are governed by true natural laws, whereby rational prevision in social affairs is possible, and proceeds as follows: "The task next in order is to fix, in general, what should be the precise subject and the proper character of these laws. . . . For this purpose, it is necessary, before all else, to make an appropriate extension to the whole of social phenomena of a truly fundamental scientific distinction that I have established and employed in all parts of this treatise, and principally in the philosophy of biology, as radically applicable, by its nature, to all sorts of phenomena, and especially to all those that can be presented by living bodies, namely, the separate consideration, but always with an exact systematic coördination in view, of the *statical* and the *dynamical* states of each subject of positive science. In simple biology, i. e. for the general study of individual life alone, this indispensable decomposition gives rise . . . to a rational distinction between the purely anatomical point of view, relative to ideas of organization, and the physiological point of view, properly so-called, relative to ideas of life. . . . In sociology, the decomposition should be operated in a manner perfectly analogous and not less pronounced, by distinguishing radically as regards each political subject, between the fundamental study of the conditions of society and that of the law of its continuous movement. This difference seems to me from now on sufficiently characterized to permit me to foresee that its spontaneous development will ultimately give rise to an habitual decomposition of social physics into two principal sciences, under the names, for example, of social statics and social dynamics, as essentially distinct from one another as are today the anatomy and the physiology of the individual." [1]

Now this fundamental division foreseen by Comte has in fact been employed with practical unanimity by sociologists. They have not always used the terms 'statical' and 'dynamical,' but they have never lost sight of the distinction that these terms indicate. None of the other terms employed present any advantages over those used by Comte, and his, accordingly, will be retained here. At the same time, since there has been much uncertainty as to the meaning of such terms as have been employed, the first task of this chapter is to give a precise definition of the word 'statics' as applied to sociology.

It is obvious, to begin with, that any definition of statics, as used in connection with social phenomena, will depend entirely upon the manner in which these phenomena are envisaged. If sociology deals with the social organism, one definition will result; if it deals with the societal process, another. The changes in Comte's thought as regards the proper domain of sociology will give point to the foregoing observation. Consider, first, the original definition that Comte gave of statics. It occurs in one of the first chapters of the *Positive Philosophy* devoted to social physics. For him, at this stage of his thought, sociology is the last science of the hierarchy. For him, at this time, as the quotation above clearly shows, biology gave a knowledge of the individual organism in all its manifestations and sociology a corresponding knowledge of the social organism. The division into statics and dynamics of the study of the social organism coincided with the political conceptions of progress and order on the one hand and with the biological conceptions of organization and life on the other. On these foundations, essentially biological, he based his first definition of statics: "In the light of this fundamental conception, . . . the true philosophical principle which is proper to [the purely statical laws of the social organism] seems to me to consist directly in the general notion of the inevitable consensus which characterizes all the phenomena whatever of living bodies, and which social life necessarily manifests in the highest degree. Thus conceived, this sort of social anatomy should have for its permanent object the positive study, experimental and rational, of the mutual actions and reactions which all the different parts whatever of the social system are continually exercising upon the others—after having made in a scientific manner, as far as possible, a provisional abstraction of the fundamental movement that is always gradually modifying them." [2]

This conception of statics as a sort of social anatomy is developed but not transformed in the fiftieth chapter of the *Positive Philosophy*, devoted exclusively to the discussion of social statics. A special and methodical treatise on political philosophy, says Comte here, will contain "a thorough and developed analysis of all the conditions whatever common to all human societies and the corresponding laws of harmony," [3]

---

[1] PHIL. POS., IV, 253-254. (Comte's italics).

[2] PHIL. POS., IV, pp. 258-259.

[3] PHIL. POS., IV, p. 430.

i. e. statics and dynamics. It is interesting to notice the subjects that will be dealt with by such a statics, studying the conditions of social existence: Such a sociological analysis will be directed by a method which "consists above all in examining successively the three principal orders of sociological considerations which are necessarily interrelated in such a subject, by appreciating the general conditions of social existence relative, first to the individual, then to the family, and finally to society proper, the notion of which, carried to its entire scientific extension, tends to embrace the totality of the human species and principally the whole of the white race." [1]

At this point in his evolution, Comte, as will be recalled, considered the question of unity, here termed consensus, and the theory of human nature to be contained in the science of biology. All his philosophical development in later years was to lead him to reconsider this position and to cause him to transfer these important problems from biology to morals. The consequences of this change upon his conception of sociology in general have already been pointed out. It is obvious that its consequences upon the definition of social statics in particular had to be no less great. The definition, in fact, was transformed. The first indication of this transformation is to be found in the second volume of the *Positive Politics*, the *Social Statics*.

In this volume, the social organism is identified with the social or human order; hence the words with which the volume begins: "The positive study of Humanity must be decomposed into two essential parts: one, statical, concerns the fundamental nature of the great organism; the other, dynamical, relates to its necessary evolution." [2] And he makes the conception of statics more precise, as follows: "It is necessary here, in the light of a provisional abstraction, to study first the human order as if it were immobile. We shall thus appreciate its diverse fundamental laws, necessarily common to all times and places." [3] And again, "this second volume must successively characterize the human order under all the various fundamental aspects that are proper to it." [4]

But an examination of the seven chapters of which the *Social Statics* is composed soon shows that its plan differs essentially from the plan outlined in the passage from the *Positive Philosophy* reproduced just above. Instead of a study of the individual, the family, and society, the *Social Statics* deals first with the theory of religion, or the positive theory of human unity, i. e. the question that Comte had originally placed in biology under the term consensus. The second, the third, the fourth, the fifth chapters treat respectively the positive theories of material property, the human family, human language, and the social organism. The study of the individual has disappeared entirely from this plan, the family and society appear, and two subjects unmentioned in the chapter on statics in the *Positive Philosophy* are presented for the first time. The sixth chapter is devoted to the positive theory of social existence—to which allusion will later be made—and the seventh deals with the general limits of variation proper to the human order.

---

[1] PHIL. POS., IV, p. 431.
[2] POL. POS., II, p. 1; Eng. tr., II, p. 1.
[3] POL. POS., II, p. 3; Eng. tr., II, p. 3.
[4] POL. POS., II, p. 4; Eng. tr., II, p. 4.

These changes in the plan outlined in the *Positive Philosophy* are due to the definition of sociology implicit in the *Social Statics*. Sociology, according to this second volume of the *Positive Politics*, is the science of Humanity, the social organism in its completest form. It embraces all the elements of human nature—prepared by biology and completed by the sociological study of the same phenomena. In fact, statics as the study of "human existence," comes very near, in Comte's mind, to being identified with the scientific study of human nature. It reveals, in Comte's words, "the general constitution of our nature." [1] "All the systematic study of human evolution consists in developing its one law: man becomes more and more religious. In fact, social dynamics is reducible to the explanation of the past in the light of this fundamental principle, *emanating from sociological statics*." [2] Dynamical considerations must therefore be subordinated to statical conceptions. Hence, it seems, dynamical laws should be three is number, "*in order to correspond exactly with the three statical elements of human nature:* feeling, intellect, and activity. . . . " [3]

Now the words just quoted are found in the third volume of the *Positive Politics*, the *Social Dynamics*, the volume in which Comte makes a capital modification in his definition of sociology by reducing it to the study of the intellect and the activity alone, to the exclusion of feeling. And the quotation just above continues as follows: " . . . but it must be recognized that they [the dynamical laws] are necessarily reduced to two, one for the evolution of theory, the other for the expansion of practice. As for the affective development, it allows of no law logically distinct, its explanation requiring only the general principle of the increase of unity." [4] And the whole *Social Dynamics* proceeds on the basis of intellect and activity as the subject of sociology.

But the question can not fail to be raised: What becomes of the *Social Statics* when the definition of sociology on which it is based is radically transformed by the new conceptions of the *Social Dynamics?* The only answer possible is that this transformation makes necessary a fundamental revision of the *Social Statics* and also of the conception of sociological statics implicitly contained therein. The change implies, in fact, the demolition of the *Social Statics*. And this inevitable inference is verified by the fact that that the revision required is in fact effected by Comte himself in the third chapter of the fourth volume of the *Positive Politics*.

This fourth volume opens with a statement of the results obtained in the *Social Statics* and the *Social Dynamics*. "The two volumes preceding have respectively characterized the fundamental nature of the human order and the necessary course of its general development." [5]

---

[1] Pol. Pos., III, p. 6; Eng. tr., III, p. 5.

[2] Pol. Pos., III, p. 10; Eng. tr., III, pp. 8-9.

[3] Ibid.

[4] Pol. Pos., III, pp. 10-11; Eng. tr., III, p. 9.

[5] Pol. Pos., IV, p. 1.

These "two studies, statical and dynamical," deal with "the general laws of our constitution and the essential sequence of our antecedents."[1] The general preamble to the volume emphasizes the subordination of dynamical notions to statical conceptions. "Although the latter must of necessity make abstraction of time, this systematic elimination in no wise alters their theoretical nor even their practical reality. Their just preponderance results from the fact that *they directly determine the fundamental unity* towards which our nature tends more and more, individual and collective."[2]

Here is the key that opens the way to the philosophical reconstruction in the third chapter of the volume. Unity, the essential concern of Comte throughout all his work, is the *result* of the operation of sociological laws; hence there must be a science above sociology. This conclusion is in direct harmony with all the other considerations on the same subject found here and there in the *Positive Politics;* considerations that find their meaning and justification in the ever increasing importance of the science of morals. Comte seems here to have reached the last stage of his philosophical progress: he sees clearly that consensus, unity, originally placed in biology, is neither biological nor sociological; more, that it *results* from the action of sociological laws upon the elements of unity. Once he comprehended the importance and the profundity of this thought, Comte was able to proceed to the revision of all his previous work.

This revision is effected, as has been said, in the third chapter of the fourth volume of the *Positive Politics,* and there is to be found the science of sociology as Comte left it. The future volume of sociology, in this final systematization (see pp. 71-73), "is essentially reducible to the combination in one volume of the two in which I have respectively condensed the two parts of social science."[3] This condensation will be composed of seven chapters, plus an introduction and a conclusion. It will establish "the statical theories of property, the family, language, and society; then the dynamic theories of fetishism, of theocracy, and the triple transition . . . It is evident that this plan consists in condensing the double elaboration proper to the treatise I am finishing [i. e. the *Social Statics* and the *Social Dynamics,* volumes two and three of the *Positive Politics*], without requiring any truly new conceptions, *after having separated morals,* the rise of which, having occurred as a result of my work, could not have a sufficiently dominating position therein."[4]

Such are the last words Comte was ever to write on sociology in general or sociological statics in particular. Nevertheless the indication here found of what is required in order to effect the necessary revision is clear enough, especially in the light of the projected volume on morals. In a word, it is this: separate from sociology all that Comte assigns to morals. In other terms, the sociology of the *Positive Politics* is a concrete and composite science; a combination of societal and moral phenomena. To make of it a purely abstract science, all that is necessary is to separate the moral from the societal phenomena.

---

[1] Pol. Pos., IV, p. 3; Eng. tr., IV, p. 3.
[2] Pol. Pos., IV, p. 3; Eng. tr., IV, p. 3.
[3] Pol. Pos., IV, p. 228; Eng. tr., IV, p. 201.
[4] Pol. Pos., IV, p. 229; Eng. tr., IV, p. 202.

The magnitude of the excisions required can be understood only by reviewing the plan of the projected volume on morals.[1] From sociology must be set aside first the elements of human nature; then the study of the family, country, humanity; next, the problems of union, unity, and continuity; finally, the study of intellect, and of activity. What can possibly remain, then, for sociology? Nothing but the abstract societal fact, the sociological phenomenon, the study of the mode of being above the biological mode and below the individual or moral mode. The true sociology must be constructed on these bases, and if the definition already given is not adequate to the task, then it will have to be attempted under better auspices.

Here, however, sociology is the study of the societal process, i. e. the continuous cumulation of collective products; and in the light of this definition, the problem of defining sociological statics is to be resumed. In the first place, there is no longer any question here of constructing a 'social' statics. It is understood once for all that the term 'social' is not an abstract term, but a composite and concrete term. The new statics, therefore, will receive another name. No further effort is to be made to construct a social statics, but only a societal statics. There will be no question in this new statics of an organism, of the general constitution of "our" nature, of the human order: This new statics will deal only with the process of collective cumulation; it will strive to determine the elements of this phenomenon common to all times and places. Wherever a living society is found, the societal processes is in operation; and statics will seek to discover what the life of all collective beings, of all societies, presents in common. There will be no question of this or that species of animal; nor of higher or lower types of social life. The point of view of the sociologist is, let it be repeated, that of the abstract biologist. One studies the societal process in all societies; the other, the vital process in all living beings.

The statical division of sociology must then deal with the general conditions of the life of societies. In terms almost identical with those of Comte, societal statics is the fundamental study of the conditions of existence of society. But there is an important difference between the two formulations: the organism 'society' has ceased to be the center of interest, and its place is taken by the process by which societies live and grow. The social organism is replaced by the societal mode of living; the social being disappears before the societal attribute. Sociological statics is the study of the fundamental conditions of the operation of the societal process, without consideration of time or place. In other terms, societal statics is the study of the conditions necessary for the continuous cumulation of collective products.

What, then, are the conditions necessary for the continuous operation of the societal process, the continuous cumulation of collective products? What are the main divisions of societal statics? To reply to this question is the purpose of the remainder of this chapter. And since an antirely new definition of sociology has just been given, it might be expected that equally new conceptions of sociological statics would follow: In reality, however, nothing will be found here but the conceptions of Comte himself. He has indicated them in the plan for the future volume of sociology, of which four chapters were to be devoted to statics. The subjects of these four chapters are identical with those of chapters two, three, four, and five of the *Social Statics.* To render these chapters adequate to satisfy the conditions of the new definition but one thing is necessary: they must be made to undergo the eliminative process clearly indicated by Comte himself. "It is clear that this plan consists in condensing the double elaboration proper to the treatise I am finishing, without requiring any truly new conception, *after having separated morals*, the rise of which, resulting from my work, could not have a sufficiently dominating position therein." [1] These words of Comte will serve as guide for the analysis about to be undertaken of the four chapters of the *Social Statics.* In other words, the conceptions to be found in the four chapters enumerated of the *Social Statics* will meet the needs of the new definition of sociology and societal statics once the elements properly belonging to the science of morals have been separated from them. The first chapter to undergo this eliminative process will be chapter two of the *Social Statics*, bearing the title: The Positive Theory of Material Property.

---

[1] See this plan in the appendix to the present volume.

A detailed analysis of this chapter will give a precise idea of the method to be followed for the succeeding chapters. It will also emphasize the composite nature of the material they contain. Chapter two, then, of the *Statics* begins with a brief résumé of chapter one. The first paragraph reads: "The whole of the preceding chapter represents human unity as always based upon the continuous accord of faith and love to regulate activity. By virtue of its affective source, religion establishes and maintains interior harmony, which the speculative basis completes and consolidates by subordinating it to the exterior order.

"By thus constructing the positive theory of religion, I have sufficiently systematized the most general conception of the human order. On this normal basis, it is now necessary to constitute social statics, by giving a more specific discussion of these universal notions as regards each of the two necessary modes of our real existence, first domestic and then political. The preceding chapter intentionally failed to take this natural decomposition explicitly into consideration, in order better to characterize the elementary laws of all human harmony, even purely personal. But this common basis should here lead to a less abstract appreciation in which the general theory of religion is first to be applied distinctly to the life of the family in order that it may then be extended to the life of society." [2]

It is evident, Comte goes on to say, that these two simultaneous states are inseparable, and that social dynamics will never separate them. "It is quite otherwise in social statics which, considering the general conditions, and not the gradual movement of human existence, has need of treating the simplest case before appreciating the more complex."[1] "In this and the two following chapters, I must apply this theory [of religion, i. e. of unity] to the positive constitution of the family, in order to devote all the rest of the volume to the direct appreciation of society proper. But before studying domestic existence, it is necessary to characterize sociologically the great human problem that it is above all destined to solve."[2] "The preceding volume founded the positive theory of human nature on the whole of biological notions. I have thus reduced the principal problem of our existence to subordinating as far as possible egoism to altruism, defined precisely by my cerebral table. All social science must now consist essentially in constructing and developing the corresponding solution, the fundamental principle of which can result only from the necessary reaction of collective upon individual life."[3]

---

[1] Pol. Pos., IV, p. 229; Eng. tr., IV, p. 202.

[2] Pol. Pos., II, p. 138-139; Eng. tr., II, p. 120.

It is essential to comprehend thoroughly the problem that Comte is here setting himself in these passages: the principal problem of human life is the establishment of harmony, exterior and interior. The elements that must be harmonized are the affective motors, divided into two classes: the altruistic or social and the egoistic or personal. The main purpose of religion is to obtain this harmony by the subordination of egoism to altruism. The general means by which this subordination is obtained are set forth in the first chapter of the *Social Statics*. But there are other and more special means than religion which aid in obtaining human unity. The family is one of these means; society is another. Both facilitate the reaction of collective upon individual life, a reaction that is the principal source of the subordination of the lower motors to the higher.

But before the operation of these two auxiliary sources of unity is studied in detail, the reaction of collective upon individual life should be envisaged from a more general point of view, applicable to the family as well as to society. These two forms of social existence both depend upon the satisfaction of material needs. Consequently, before discussing them, the question may be asked: How does the satisfaction of material necessities aid in subordinating egoism to altruism? How does it facilitate the securing of harmony among the elements of human nature?

Comte approaches the problem in a curious way. He examines the development of the three divisions of human nature, affection, intellect, and activity, in a purely hypothetical situation, a situation in which human nature is free to follow its affective and intellectual tendencies without the necessity of exercising also its activity. He shows that in such a situation, the sympathetic instincts would soon dominate the personal instincts; the intellect would follow its natural predilection for esthetic exercise; and all acts would be transformed essentially into play. "The continuous suppression of material exigencies would render the human type more pure and more clear, its evolution more free and more rapid."[1]

---

[1] Pol. Pos., II, p. 139; Eng. tr., II, pp. 120-121.
[2] Pol. Pos., II, p. 140; Eng. tr., II, p. 121.
[3] Pol. Pos., II, pp. 140-141; Eng. tr., II, p. 122.

Next he goes on to show that the satisfaction of material necessities produces in the individual an effect exactly contrary to that which he had just described. It excites the egoistic instincts and represses the sympathies; and he adds that the intellectual efforts to which it gives rise have the same result, although indirectly. Nevertheless, he says, "this fatality retains a dominant influence only so long as practical existence remains strictly individual. . . . As soon as it begins to become social, even in the simple domestic stage, continuous coöperation, whether simultaneous or more especially successive, tends to transform more and more the egoistical character of primitive industry,"[2] for each member of the society is then urged to act above all for others, and so begins the situation in which the sympathetic instincts can exercise an effective influence on the human organization.

But how is a transformation so profound effected? How can the individual reach the point of living for others? This possibility arises only when the individual becomes the member of a group. The question thus arises: What is the condition required for the advent of the group, even in its simple domestic stage? In order to reply to this question, Comte was under the necessity of determining the first great division of sociological statics. "This decisive transformation, which is the foundation of our true destinies, can be scientifically appreciated only by first establishing two correlative laws, which have hitherto escaped notice, regarding our material existence. Their natural combination constitutes at once the positive theory of accumulations, without which such a modification would always remain impossible. Thus the admirable spontaneous wisdom which directs the gradual institution of our language has everywhere qualified as *capital* every durable group of material products, in order the better to indicate its fundamental importance for the whole of human existence."[3]

In this remarkable way, then, Comte was led to the establishment of the sociological theory of capital, of material property, of accumulation, the first of the statical conditions for the process of collective cumulation. In some seven pages,[4] he presents all that he has to say on the subject, and he continues as follows: "We have recognized above that without accumulations, at least simultaneous and even successive, material needs would necessarily impress a profoundly egoistic character upon the whole of existence. It is necessary now to appreciate how the institution of capital tends to transform such an impulsion radically, so as finally to permit the universal preponderance of altruism,"[5] and to the determination of the nature of this transformation all the remainder of the chapter is devoted.

Nothing could more clearly justify the opinion that the sociology of the *Positive Politics* is not an abstract but a concrete science than the nature of the argument of the chapter under discussion. In the first place, the elements of human nature on which the whole discussion rests were considered by Comte at the moment as an emanation from biology; in the second place, the whole question of human nature was later transferred to morals; in either case, the chapter deals with phenomena which have no place in an abstract sociology. The deductive nature of the entire argument results directly from this combination of data proper to distinct sciences. Deduction has no place in the determination of the fundamental bases of a purely abstract science. As soon as this fact is comprehended, it must be immediately asked: What is the purely sociological element of the argument? How can it be distinguished and separated from the non-sociological elements?

---

[1] Pol. Pos., II, p. 148; Eng. tr., II, p. 127.
[2] Pol. Pos., II, p. 150; Eng. tr., II, p. 129.
[3] Pol. Pos., II, p. 150 (Comte's italics); Eng. tr., II, p. 129.
[4] Pol. Pos., pp. 150-157; Eng. tr., II, pp. 129-134.
[5] Pol. Pos., II, p. 157; Eng. tr., II, p. 134.

The answer to these questions is found at once by the application of the directions given by Comte himself for the construction of the future volume on sociology, the plan of which has already been presented: Separate the elements of morals from the sociological elements of the discussion. When this separation has been effected in the second chapter of the *Social Statics*, nothing is left but the problem of capital, i. e. the positive theory of accumulation. Thus, what was seemingly an incidental section of the chapter as written comes to be its real center and object. Comte himself seems to have felt something of this difficulty, of this logical inconsistency, while he was writing the chapter, for in closing the brief section dealing with capital he says: "Nevertheless, whatever importance such a notion may acquire when my successors shall have adequately developed it, I must not forget that it here constitutes only a simple incident in an immense question of social statics. Its very position even makes more clear the radical inanity of speculations relative to the material existence of humanity when they are isolated from the whole mass of sociological conceptions. For the theory that I have just sketched must serve me only to characterize properly the true normal reaction of activity upon feeling and intellect, and consequently its fundamental influence upon the whole social organization, first domestic and then political." [1]

Comte's method in this chapter, then, was to examine into the operation of the elements of human nature under the conditions resulting from the creation of material property, or capital. The laws of development of capital were not, therefore, primarily in point; the problem of main interest was the nature of the changes in the elements of human nature as regards their relative predominance. Hence the deductive nature of the investigation; hence also the ulterior necessity of separating the two influences, sociological and moral, and the devoting of a separate science to each. Hence, finally, the ultimate recognition of the fact that the solution of the problem of capital should *precede* and not follow the solution of the problem of human nature. Otherwise, the operation of the second element would be determined and not merely conditioned by the operation of the first element. And here, again, is to be found the final explanation of the reduction of the entire volume of *Social Statics* to the four chapters of the projected volume on sociology, "definitively constituted," "properly so-called."

---

[1] Pol. Pos., II, p. 157; Eng. tr., II, p. 134.

In the light of the foregoing analysis, it is now possible to return to the task of presenting the statical elements of sociology, of stating the conditions requisite to the operation of the process of collective cumulation. The first of these conditions is the continuous accumulation of material products. This accumulation is governed by two correlative laws, the natural combination of which constitutes the positive theory of accumulation. "Of these two economic laws, one might be called subjective and the other objective, since the first relates to ourselves and the second to the external world. They consist in these two general facts: first, every man can produce more than he consumes; next, the materials obtained can be kept beyond the time necessary for their reproduction." [1]

The first of these two laws is "the initial foundation of every real aptitude to live, not merely for self, but also for others." [2] It is found in operation far down in the animal scale. "In many animal species, where material industry is limited to the gathering and the keeping of useful substances, the aptitude to accumulate them beyond personal and even domestic need becomes undeniable, however slightly active the animal may be. Among us, where labor consists especially in a modification more or less profound, this condition often retards the efficacy of our intervention although it guarantees the utility and also the stability of the results. Nevertheless, even then, we recognize, down to the crudest groups, that each head of a family can produce far beyond what is needed for the subsistence of him and his." [3]

"The second material condition of social existence implies the other evidently, but without in any wise resulting from it." "We could easily conceive of a terrestrial constitution which would render all our productions whatever so alterable that they would be destroyed before they could be replaced. If we stop a moment at such a hypothesis, we recognize at once that all civilization would then become at once impossible. But our most unfavorable milieus are happily very far from this disastrous preponderance, even as regards agricultural products, the least susceptible of conservation. . . . In the majority of milieus, some very simple precautions, soon discovered by the smallest groups, permit habitually of keeping all alimentary substances for a long time." [4]

"After having appreciated separately each of these two conditions, it is easy to feel, in bringing them into relation, that their natural combination at once permits of the accumulation of our temporal wealth. Even though the excess were smaller and would keep a much shorter time than ordinary cases indicate, it suffices that this surplus should exist and that it should persist beyond its reproduction to render possible the formation of material treasures. Once originated, they increase spontaneously with each generation, domestic or political, especially when the fundamental institution of money permits the exchange, almost at will, of the less durable productions against those that pass easily to our descendants." [1]

---

[1] Pol. Pos., II, pp. 150-151; Eng. tr., II, pp. 129-130.
[2] Pol. Pos., II, p. 152; Eng. tr., II, p. 131.
[3] Pol. Pos., II, p. 151; Eng. tr., II, p. 130.
[4] Pol. Pos., II, pp. 152-153; Eng. tr., II, p. 131.

"Such is the first necessary basis of all real civilization, in the light of the natural fatality which imposes upon us without possible resistance a constant activity in order to maintain our material existence, on which rest our most sublime aptitudes. Although our cerebral disposition to live for others constitutes certainly the most precious of human attributes, this insurmountable obstacle would render it socially sterile if we could not, in fact, accumulate and consequently transmit, the means of providing for it." [2]

"Positive labor, i. e. our real and useful action upon the external world, constitutes necessarily the initial source, whether spontaneous or systematic, of all material wealth, public as well as private, for before being able to be of service to us, all natural materials always require some artificial intervention, were it only to pick them up from the ground in order to transport them to their destination." [3]

Into the details of this theory—a theory that removes the whole study of capital from the metaphysics of political economy to the solid ground of sociological induction—it is impossible to enter here. The utilization of material wealth, its management, its ownership, its production, consumption and transmission—these subjects are beyond the scope of the present chapter. All that can be said here is that capital—the living labor of dead men—is but the human aspect of the fundamental statical element, *accumulation*, without which no society of whatever type could begin or endure. In short, for the process of collective cumulation to operate, the accumulation of material products is a prime essential.

In view of the long analysis of the second chapter of the *Social Statics*, undertaken for the purpose of showing Comte's method of envisaging the problems of sociological statics at this period of his career, no similar analysis of the succeeding chapters of the same volume will be offered. The essential difficulty, namely, the deductive nature of the argument, has been stated; and it characterizes the remaining chapters to a greater or less degree. They are all combinations of societal and moral phenomena, and the genuinely inductive sociological elements can be distinguished only by separating the moral elements from the others. This purgation is now to be accomplished for the third chapter of the *Social Statics*, which deals with The Positive Theory of the Human Family.

The very title of the chapter indicates the changes necessary. Sociology as an abstract science knows nothing of human nor of the family. It deals with a process, not with this or that species nor with this or that social organism. What it is in search of is the societal element in the smallest, or the largest, collective organism. This element is to be found in the chapter under discussion, but here again it is necessary to separate the societal fact from the moral fact. The family, says Comte, is "the immediate element of society, or what is equivalent, *the least extended and the most spontaneous association*." [1] And he goes on to say: "The decomposition of humanity into individuals proper constitutes only an anarchical analysis, as irrational as immoral, which tends to dissolve social existence instead of explaining it, since it becomes applicable only when the association ceases. It is as vicious in sociology as would be in biology the chemical decomposition of the individual himself into irreducible molecules, the separation of which never takes place during life." [2] "The smallest society, namely the family, sometimes reduced to its fundamental couple, constitutes the true sociological element." [3] "The natural laws of all human association should be dogmatically explained first as regards its lowest degree," [4] i. e. the family, and in its normal, i. e. monogamous, form.[5]

---

[1] Pol. Pos., II, pp. 153-154; Eng. tr., II, pp. 131-132.
[2] Pol. Pos., II, p. 154; Eng. tr., II, p. 132.
[3] Pol. Pos., II, p. 154; Eng. tr., II, p. 132.

"In this fundamental degree of the human family, the natural laws that regulate all associations whatever become easily verifiable, because the extreme simplicity of the case permits no durable illusion about them, although at first it would have prevented their discovery. We feel in the family, better than elsewhere, that every permanent union must rest at once upon the three essential parts of cerebral existence: feeling, intellect, and activity. For the bond the most firmly cemented by affection is profoundly altered and often is dissolved when a common faith does not consolidate the mutual love. Even when the conformity of opinions fortifies the affective harmony, a certain habitual coöperation between distinct activities is still necessary if the union is adequately to resist the various jars, exterior and interior, to which it is subject." [6]

If these few hints are considered in the light of the definition of sociology which makes of it the science of collective cumulations, and in the light as well of the separation between the societal and the moral that Comte counselled, the essential element of interest in the discussion to the sociologist will become clear. What is necessary for the formation and transmission of societal products is an association of organisms. The family is the instance, par excellence, of the union in which is operated the societal process. It is not, however, the sole source of collective cumulations. They result, as already explained, from combinations of efforts,—and in this combination no permanence is necessarily implied. It is the association that gives the results: here is the societal element; it is feeling that makes the association permanent: here is the moral element. The word 'union,' then, may be reserved for such genuinely collective beings as the family; and the word 'association' applied to the relations between organisms whence arises societal existence. The second statical element of sociology is therefore *association.*

---

[1] POL. POS., II, p. 180; Eng. tr., II, p. 152.
[2] POL. POS., II, pp. 180-181; Eng. tr., II, p. 152.
[3] POL. POS., II, p. 181; Eng. tr., II, p. 153.
[4] POL. POS., II, p. 182; Eng. tr., II, p. 154.
[5] POL. POS., II, p. 192; Eng. tr., II, p. 162.
[6] POL. POS., II, p. 192; Eng. tr., II, p. 162.

The third statical element is probably the simplest of all. Comte discusses it in the fourth chapter of the *Social Statics:* The Positive Theory of Human Language. It is clear that it would be almost impossible to arrive at collective effort without the power of transmitting conceptions, whether ideas or projects, from one member of a group to another. Communication, that is, is indispensable for societal existence.

The theory of communication as Comte developed it is as follows: Any language whatever must be studied in the light of a true general definition of signs. "Every sign, properly so-called, results from a certain habitual connection, whether voluntary or involuntary, between a movement and a sensation. By virtue of such a connection, sometimes each movement reproduces the corresponding sensation objectively, and sometimes the cerebral recurrence of the latter represents subjectively the movement whence it first emanated. It is thus that the brain translates to the world without its different interior impressions by the mutual relations of the two nervous apparatuses that are external to it. Communication, moreover, follows the same essential path, whether the motor apparatus and the sensory apparatus belong to a single individual or to two distinct beings." [1]

A sign is thus a constant connection between an objective influence and a subjective impression. Every movement that recalls a sensation is in fact essentially objective, even when it emanates from the organism to which the sign thus produced is addressed. There are, consequently, two varieties of language: one, the involuntary language to which the lower animals are limited; the other, the more or less voluntary language that is developed in all the higher animals, even beginning at the degree of organization at which is found a full separation of the sexes. "In the first case, the acts accomplished become alone the necessary signs of the propensities that have inspired them or the projects that they are realizing. This language, to which should exclusively belong the name of *language of action* is spontaneously understood by all beings similarly organized. But it can also be essentially comprehended by all the higher animals, by virtue of the common basis of organization which relates all living natures, whose gradual elevation never results from anything but a development of these general attributes." [2]

The second variety of language, "in so far as it is voluntary, is always artificial, even with the animals, all of whom modify, in the same manner as ourselves, its habitual institution. For they, too, know how, in conformity with their exterior or interior needs, to change the ordinary connection between the movement and the sensation whose coöperation produces each of their signs. Nevertheless, the institution of the latter never becomes arbitrary, under penalty of failing its principal destination, whether even as a means of personal liaison, or above all as a means of domestic or social communication."[1] These voluntary signs "naturally acquire the proper fixity by virtue of their original source in involuntary signs, gradually decomposed and simplified, without ceasing to be intelligible. It is thus that is necessarily established the normal junction between the true sociological theory of language and its simple biological theory. In fact, voluntary signs are always true social institutions, since they were primitively destined for mutual communication. If they are then applied to the improvement of individual existence, especially mental, this indirect property, which remains limited almost to the human species, would never have sufficed to determine their formation. The old philosophy accorded to them a vicious preponderance only from its inability to place itself at the social point of view. Besides the fact that this voluntary language is really the only one that need directly interest us, it alone allows of a decisive progress, in proportion as society becomes complicated and extended. It seems peculiar to humanity only because of our superior sociability."[2]

---

[1] Pol. Pos., II, pp. 220-221; Eng. tr., II, pp. 185-186.

[2] Pol. Pos., II, p. 222 (Comte's italics); Eng. tr., II, p. 187.

Without tracing the theory further, and showing how Comte comes finally to include the entire domain of Art in *communication*, it will be enough to emphasize a final point: "In its social aspect, the institution of language should finally be compared to that of property. . . . For the first accomplishes for the spiritual life of humanity a fundamental office equivalent to that which the second exercises as regards the material life. After having essentially facilitated the acquisition of all human knowledge, theoretical and practical, and directed our esthetic effort, language consecrates this double wealth, and transmits it to new coöperators."[3]

The fourth of the conditions necessary for the operation of the societal process is less easy to grasp and more open to denial than the others. Nevertheless, as will be seen, the highest types of society could not exist without it, and in its primitive forms it is to be seen in spontaneous operation in the most elementary collectivities. Comte discusses it in the fifth chapter of the *Social Statics* under the title: The Positive Theory of the Social Organism. In this chapter, Comte turns his attention from the study of the family to the study of the larger collective being, society, first as regards its general constitution, and then, in the sixth chapter, as regards its fundamental existence.

The strictly societal element of the fifth chapter is to be found in Comte's positive theory of social forces which he presents by way of introduction to the principal social considerations of the chapter. Twenty-two centuries ago, he says, "the true creator of provisional sociology," "the incomparable Aristotle, discovered, in fact, the essential character of all collective organization, when he made it consist in the separation of offices and the combination of efforts."[4]

"In fact, this great principle suitably establishes the two general conditions of independence and coöperation between which every collective organization must institute an adequate reconciliation." "On the one hand, without the separation of offices, there would not exist between the diverse families a genuine association, but only a simple agglomeration, even when sedentary life has become the dominant form."[1] On the other hand, the principal character of human existence, living for others, "would not at all be realizable if the separation of labors was not completed by the combination of efforts, either systematically or at least spontaneously. On the contrary, this partition of functions might easily become a continuous source of grave dissidences, by virtue of the opposition of habits, opinions, or even propensities that it would tend to arouse in the different families. The need of coöperation, inseparable from that of independence, demands, then, also its own permanent satisfaction, through a fundamental institution adapted to the purpose. It is so much the more indispensable as the instincts that urge us to isolation or to conflict are naturally more energetic than those which dispose us to concord. Now such is the general destination proper to the force of social cohesion everywhere designated by the name *government*, which ought at once hold within bounds *(contenir)* and direct."[2]

---

[1] Pol. Pos., II, p. 223; Eng. tr., II, p. 187.
[2] Pol. Pos., II, p. 223; Eng. tr., p. 188.
[3] Pol. Pos., II, p. 254; Eng. tr., II, p. 213.
[4] Pol. Pos., II, p. 281; Eng. tr., II, p. 234.

In other words, if all the individuals of a given collectivity were each to accomplish absolutely the same labor, the process of collective cumulation would cease; on the other hand, if all were to perform absolutely different and unrelated labors, the cumulation of collective products would be inconceivable. There is therefore a fourth condition necessary to the existence of society. The general nature of this fourth element is implied in the passages above. The difficulty is to find a proper word to contain the idea that presided over the composition of these passages of the fifth chapter of the *Social Statics*. Comte's word government seems too concrete, too intimately related with current political thinking. What is wanted is a word applicable to the division of societal labor; a word which will bring to mind no special case. The word 'direction' seems to meet these demands; and consequently the fourth and last element of statical element of sociology is here called *direction*.

Such, then, according to Comte, are the four conditions of existence of every social organism, of every collective being, of every society. Because of the round-about road by which Comte discovered them, no doubt it will be necessary in the future to subject them to a profound revision. Nevertheless, it seems doubtful that they will be essentially modified. They obviously constitute the elements that must always be kept in view when social interests are to be regulated. Any law or any institution that tends to interfere with or to destroy even one of the four conditions of societal existence is by that fact socially dangerous. The thought needs no development, even if so concrete a topic had right to a place in an abstract discussion; the fact is obvious. Nevertheless, though the discussion is out of place here, it serves to emphasize the relation between the solution of particular social problems and that of the sociological problem in its most general aspect.

---

[1] Pol. Pos., II, p. 293; Eng. tr., II, pp. 242-243.

[2] Pol. Pos., II, p. 295; Eng. tr., II, p. 243. (Comte's italics).

The thought serves also to throw into prominence the concrete aspects of Comte's conception of sociological statics at the period of the *Social Statics*. For the last time, this composite nature of all the five chapters just discussed must be emphasized. No better illustration of the composite and concrete nature of the great philosopher's work at this period could be found than the following passage—a passage in which is undoubtedly to be found the source of the reasoning that finally condensed the entire *Social Statics* into the four chapters of the projected volume on sociology: "As soon as property, the family, and language, developing on a suitable territory, lead any population whatever to the same government, at least spiritual, there exists a possible center of the Great Being." [1]

These words may be paraphrased in the more abstract language of the present study: *Whenever there is accumulation, association, communication, and direction, the societal process operates, and a society, however primitive, begins to be.*

---

[1] Pol. Pos., II, p. 291; Eng. tr., II, p. 241.

The purpose of chapter seven is essentially transitional and preparatory. The aim of part three of this volume is to reveal order in the societal movement that results from the continuous operation of collective cumulation. It is therefore strictly in point to clarify still further the concept of sociological dynamics, as a preparation for the chapters to come. Of great usefulness in this connection is the elimination from the discussion of what has sometimes been termed 'cinematics.'

A second step toward part three is the establishment on the basis of an age-old induction of the two main classes of societal facts,—a discussion whence emerges a conclusion of extreme significance as to the importance of Comte's later work for present-day psychological investigation.

The third step consists of a statement of the nature of scientific law, and the justification for the presentation of the course of societal movement in the form of a curve.

CHAPTER VII.

Societal Dynamics

THE reader who recalls the beginning of the preceding chapter will understand that it is not necessary here to make a prolonged examination into the nature of sociological dynamics. As soon as the statical conditions just defined exist, the societal process of collective cumulation begins. The object of societal dynamics is to reveal the laws of the operation of this process. As Laffitte said, in words that are somewhat too concrete, "it is clear that every individual that comes into the world is born into a determinate sociological milieu, and that, besides the hereditary aptitudes with whch he may be endowed, he is, by the very necessity of things, initiated into the conceptions, practices, and feelings of his milieu. His activity and that of his kind modify this situation more or less, and thus there is transmitted to the next generation a sociological milieu different in some degree from the preceding and in which the new generation will have to live. In this way, then, there is a succession of sociological milieus, one engendering the other. It is the laws of this succession that we wish to study." [1]

Repeated in more abstract form, this statement reads: Every action of every individual takes place in a determinate societal situation. This action modifies the societal milieu in which it is accomplished. Thus the next such action is performed in a sociological milieu different from that in which the previous action was performed. Thus there is a succession of sociological milieus, all deriving one from the other, and each determining the nature of that which follows it. It is the laws of this succession of milieus that the dynamics of sociology has to study. In the words of Comte, interpreted in the light of the new definition of sociology, "the true general spirit of sociology consists in conceiving each social [read: societal] state as the necessary resultant of the preceding and the indispensable motor of the following state. Science, therefore, from this point of view, has for its object to discover the constant laws that govern this continuity." [2]

The general problem, then, with which societal dynamics must deal, seems to be formulated with sufficient definiteness for an attempt to solve it to be possible; but there is one question that must be answered before the definition of sociological dynamics can be regarded as definitively fixed. This question arises out of chapter six of the *Social Statics*. In this chapter Comte discusses a theory which seems to hold a middle ground between statics and dynamics. Indeed an attempt has been made to avoid the difficulties of which Comte's theory is an expression by the division of sociology into three parts: statics, dynamics, and cinematics. It is necessary therefore to reproduce the passages in which Comte states this intermediate theory.

---

[1] COURS DE PHILOSOPHIE PREMIÈRE, I, pp. 336-337.

[2] PHIL. POS., IV, p. 292.

The passages in question belong to the chapter of *Social Statics* that bears the following title: The Positive Theory of Social Existence. In this chapter Comte is seeking to show how the statical elements that he has been discussing in the earlier chapters of the volume are related to the dynamical laws that he is going to establish in the *Social Dynamics*. His words are the following: The positive theory of social existence "seems at first either to be a part of the statical theory I have just established or to fall in with the dynamic purpose of the next volume [the *Social Dynamics*]. The proper nature of this chapter will be sufficiently defined when this preliminary uncertainty shall have been suitably dissipated in the light of a decisive distinction.

"It is necessary to introduce, as regards every living being, between the connected ideas of organization and life, an intermediate idea, too vaguely conceived of hitherto, for which should be reserved the special name of *existence*. Applicable to all real substances, this denomination always indicates their proper and continuous activity. In biology, it corresponds to the permanent constituents in each system of vital phenomena: or the life of the being consists in the series of modifications that its existence undergoes. This general distinction becomes more and more pronounced in proportion as we rise to organisms more complex and more modifiable. Its principal application belongs to sociology, where it really prevailed, although under an implicit form, since Aristotle founded the theory of sociological order without in any wise conceiving of that of progress, reserved for modern reason. So long as science treated human societies as immobile, it was not destined to extend to them the name of *life*, which at once recalls a sequence of changes ending always in death. This term is scientifically appropriate only since the decisive advent of the notion of continuous progress. The general term of *existence* was, then, preferable as regards the activity fundamental to the great organism. Now such is the point of view proper to the present volume, in which I had first to study the structure of the collective being only in order next to appreciate the whole of its essential functions. Social statics ought never to separate the related notions of organization and activity. Only, it is limited to studying, under the name of existence, the activity common to all places and times, reserving for dynamic sociology this double source of normal modifications, whence results the life properly so-called.

"In inert nature, the activity of any system whatever tends to destroy its structure, even in mechanics. But these two attributes become, on the contrary, profoundly solidary in all living beings, within the normal limits of intensity and duration proper to each case. In them, the structure is developed and even maintained, only by virtue of the corresponding activity. Always the extension and the complication of the one accompany those of the other, as we mount the scale of beings. This is why their most complex interrelation is peculiar to the collective organism. When the activity of the latter is envisaged only as tending to conserve the structure, its study belongs to the domain of statics. When we see in activity the source of the development, the study belongs to the domain of dynamics. It is necessary then to conceive of this chapter as instituting a necessary transition between that which precedes and the next volume. After having characterized the structure of the collective being, I must appreciate its existence before examining its life. The statical study would remain too incomplete, and the dynamical study inadequately prepared, without such an intercalation, which should offer neither repetition nor anticipation."[1]

Clearly, given the conceptions dominant in the mind of Comte when he was writing his *Social Statics*, there is a real need for this intermediate discussion. It is the direct result of the belief that sociology is the study of the social organism. Clearly, also, there is no need for such an intercalation if these conceptions are radically altered. If, for example, the science of sociology be defined, as Comte did define it in the *Social Dynamics*, as the science of the intellect and the activity, what becomes of the conception of the social organism, and in consequence, what becomes of the conceptions of social life and existence? The only possible answer is that they disappear. So long as sociology remains the science of the social organism, there will be a need for the study of social existence as Comte defined it; but when sociology ceases to be the study of a being and becomes the study of an attribute, a property, of the societal mode of being, the conceptions of existence can have no sociological application. In short, the problem of social existence is nothing but the result of the composite nature of sociological science as Comte conceived of it at the period of the *Social Statics*. When the abstract definition of sociology developed in the present study is firmly fixed in mind, the problem of social existence ceases to offer any embarrassment. And it is most significant that Comte himself omits it entirely from the plan of the projected volume on sociology.

At any rate, whatever the reason for Comte's omission of the subject from his revised conceptions, the question of the nature of social existence does not exist for the student of abstract sociology as already defined. Sociology, according to the analysis made in chapter five, is the science of collective cumulation. This science is divided into two great divisions. Of these divisions, one studies the conditions of operation of the societal process; the other deals with the laws of this process once it has come into operation. It is possible that the future may find more precise names to denote these two divisions of sociology; Comte provided for this possibility in his *Positive Philosophy;* but for the present and for this volume, the terms employed by Comte, statics and dynamics, will be employed, each of them being defined in an entirely abstract sense.

Societal dynamics thus defined, the next task is to find the laws of the process of collective cumulation. But before beginning this inductive investigation, two preliminary questions should be answered. First, is it possible to divide societal phenomena into classes, and if it is, what are these classes? Second, what is the nature of the laws that are to be sought?

---

[1] Pol. Pos., II, pp. 339-341; Eng. tr., II, pp. 276-277. (Comte's italics).

The first of these subordinate investigations is, as will be seen, indispensable to success in the main task. The second, although less important, will be of immense assistance in lending precision to the efforts yet to be made.

What, then, is the classification of the phenomena of sociality?

The answer to this question can be the result only of a profound induction based upon the observation of all societies of all times, whether human or other. Obviously, the forms of the most highly developed societies, those, namely, developed by the animal *Homo*, will be the principal sources of the materials for this vast induction. The study of other types of society will serve to correct and verify the results obtained from the study of the principal type, but it can be only secondary. Its minor importance in sociological investigation is the direct consequence of the fact that the societal predominance of a given species renders impossible the social development, whether spontaneous or, *a fortiori*, systematic, of other species. For this reason, it is human society that must be the object of the inductive study which is to result in the classification of collective cumulations.

So great a problem of induction, even after its restriction to human society, seems to imply an individual effort beyond the power of any single human mind. It seems impossible that any genius whatever should be sufficiently great to rise to the degree of induction at which he could embrace all the activities of all men, in all times and places, and reduce them to a few simple classes. And it is impossible in fact. Attacked entirely *de novo*, with no preliminary assistance, such a problem would have certainly baffled the mind of Comte or any other thinker. Such an inductive labor can be nothing but an admirable example of the operation of the process of collective cumulation. It is, in short, a task for humanity alone.

Here is the place to emphasize, once for all, the fact that it was never necessary to have outlined, even in the most tentative form, the science of sociology in order that the inductive classifications just referred to should have been possible. Inductions leading to the establishment of classes of societal phenomena have been in constant operation ever since the beginning of the most primitive society. Societal phenomena have been presented, at the same time as other phenomena, to the observation of man; and they have been grouped and classed, as have been the other phenomena, long before the most elementary conception of abstract science had been developed. This conception, in fact, is the direct result of the classifications made unconsciously and unintentionally throughout the centuries. In the most distant periods, these classifications were naturally of an entirely spontaneous nature and the results were wholly empirical; nevertheless, it is upon these often forgotten efforts that the abstract sciences are based. Science, as Comte long ago remarked, is nothing but the systematized development of every-day knowledge. Hence the positive science of sociology was provided from the very first with immense collections of facts and important cumulations of efforts,—facts and efforts that had been preserved in language, and have served as a guide for sociologists in their investigations, usually without their conscious knowledge.

The work of Thales, already mentioned, is a striking example of the results that can follow from collective cumulations in the simplest domain of all, the mathematical. Other examples of the operation of the societal process are easily to be found in the other lower sciences; but the best example in relation to the immediate subject is to be found in sociology itself.

The spontaneous cumulation of sociological knowledge, as a result of the operation of the societal process for centuries, had established fundamental classes of social facts long before the conception of a science of sociology had ever been reached. It was this entirely empirical sociology that sketched the distinctions between classes of sociological phenomena. It was this spontaneous sociology that established the classification of social facts on which sociologists have constructed their theories. It was this first form of social science that furnished the empirical data of which scientific thinkers have but made the conscious application. This primitive distinction between classes of collective phenomena divides them into physical and mental. The physical acts of organisms living in society are collective and cumulative; their intellectual operations are collective and cumulative also. Hence the age-old separation of societal facts into thoughts and acts. This is the inductive classification on which must rest the dynamical division of a positive sociology.

But, it may be objected, what is there new in this classification? Can a distinction so old serve as a basis for a science so new? The answer is easy: There is nothing new in this distinction. All that is to be done here is to make a systematic use of one of the oldest results of empirical sociology. The antiquity and universality of this classification is the best possible proof of its incontestable validity. Society is but a combination of these two elements; it has always been so; it will remain so. When the statical conditions already enumerated exist, the societal process operates, thoughts and acts are collectively cumulated, and social existence begins.

Now it has already been remarked, no doubt, that these two divisions of the societal fact—the results of spontaneous inductions based upon the empirical observation of social phenomena during thousands of years—are exactly parallel to the divisions established by Comte in the first chapter of the *Social Dynamics*, the chapter in which sociology is defined as the science of the intellect and the activity. The systematic appreciation and the empirical judgment thus support one another. It should, however, be noted that Comte did not obtain his classification inductively, either by force of his own genius nor through the labors of preceding generations; he established it deductively. To follow the steps of reasoning by which he was led to his conclusions will afford another opportunity for throwing light upon his development as a thinker; it will aid as well in making more precise the nature of the distinction on which depends the fundamental division of the domain of sociological dynamics.

It will be recalled that in Comte's mind at the time he was writing the *Social Statics*, the statical division of sociology dealt with the study of "the general laws of our constitution," with the laws of "our immutable nature." These laws, based first upon the general indication of biology as to human nature, were then to be perfected by the study of the social order that human nature had established. The division of human nature into three elements: intellectual, active, and affective, resulted from this biologico-sociological study. One of these elements, the affective or moral, was separated from the two others in Comte's mind at the period of the composition of the first chapter of the *Social Dynamics*. This affective element, the feeling, was then calling more and more for the institution of a new abstract science to deal with it. The science of sociology, in consequence, could concern only the two remaining elements: the intellect and the activity. Such was the deductive route by which Comte arrived at his division of sociological facts into two categories.

Nevertheless, this deductive definition of sociology as the science of the intellect and the activity, i. e. as essentially the true science of the understanding, does not present Comte's final conceptions. The plan of the future theoretical volume on morals clearly shows that Comte had later transferred to morals the study of the intellect and the activity. Can these two opinions be reconciled? And if so, how? It is time to resolve this difficulty, for upon its removal depends the solution of all the difficulties raised by the various definitions of sociology given by Comte.

The definition of sociology as the science of collective cumulations gives the key to the desired solution. In brief it is this: Sociology does not deal with the intellect and the activity in so far as they are elements of human nature. Comte was right in transferring the study of these elements to the science beyond sociology. These elements are not societal phenomena. Comte, in considering them as sociological, was confusing the object of sociology with its subject. The very page, even, can be cited where he commits this error. To say that "we are now authorized to reduce the systematic foundation of the general laws of the human movement to the two connected rules distinctly demanded by the simultaneous up-growth of intellect and activity" [1] is not the same thing as saying that "social dynamics should immediately study only the continuous movement of opinions and acts."[2]

Yet there is an obvious agreement between the empirical induction that divides societal phenomena into thoughts and acts, and the systematic deduction that reduces the domain of sociology to the study of the intellect and the activity. This agreement must be explained: to reveal the grounds for it is to account for the contradiction between the last definition of sociology that Comte gave and the plan of his projected volume on morals. In brief, the definition of sociology is the result of an inversion of method. The division of human nature into elements including among others the intellect and the activity is the *outcome* of the sociological induction that divides collective cumulations into thoughts and acts. In other terms, the fact that societal phenomena can be divided into these two great classes is the logical justification for the establishment in the mind of man of a section devoted to ratiocination and of another coördinating action: the intellect and the activity, according to Comte; intellectual centers and motor centers, in the biological language of today. In still other words, the principal divisions of the brain must be determined, precisely as the very existence of the brain itself must be determined, by virtue of subjective considerations, based upon the necessity of finding within the source of the collective cumulations that are to be found without. All that can result from biological investigation is the experimental verification of the attributions inspired by the objective manifestations.

---

[1] Pol. Pos., III, p. 12, line 11; Eng. tr., III, p. 10, line 29.

[2] Pol. Pos., III, p. 12, line 22; Eng. tr., III, p. 11, line 1.

Comte, then, committed a very natural error, an inevitable one indeed, common to all his predecessors and the great majority of his successors. He found, and they found, everywhere a distinction between thoughts and acts. He and they were convinced of the biological nature of this distinction. His predecessors, particularly, could not rise to the conception of the sociological nature of this distinction, because the very possibility of a sociology had not been seen. Consequently they could not understand that biology had but verified the empirical inductions of a spontaneous sociology. It was impossible for them to see that the need for finding biological organs whence thoughts and acts could arise can only follow and not precede the inductions of sociology. That is to say, the existence of true thinking, aside from reactions to sensations, and of real activity, aside from mere movements, can be discovered only in the phenomena of social life.

In short, a scientific knowledge of human nature can be obtained, not before, but only after, the phenomena of sociology have been reduced to law. This knowledge is not the highest division of biology; it is not biological at all; it is not derived from a science between biology and sociology; it comes from a science above sociology in the scientific scale. It is this fact of which Comte finally comprehended the significance; it is because of this advance that he asserted that the philosophical superiority of the *Positive Politics* over the *Positive Philosophy* lay in the institution of the science of morals. And here, in conclusion, is the reason why he transferred the study of the intellect and the activity from sociology to morals. He had understood, once for all, the import of his own remark: "The special study of the intellect and the activity being separated from that of feeling, it allows of an appreciation only of *results,* the source and destination of which belong to the science that follows." [1]

---

[1] POL. POS., IV, p. 232; Eng. tr., IV, p. 205. "Any real science of society will obviously study what it professes to study, namely, a society. In so doing it must watch what really happens, that is, *consequences* as distinguished from purposes or motives." Sumner and Keller, THE SCIENCE OF SOCIETY, III, p. 2175.

The enchainment of thought whence came the institution of a science above sociology may then be summarized as follows: A spontaneous induction, beginning with man's first observations of social life, gave ultimately a division of social phenomena into thoughts, acts, and feelings. So the basis was laid for the division of human nature into intellect, activity, and affectivity. Biology, in the sense of a natural science, including all aspects of living beings within its scope, naturally seized upon these inductions and the conclusions that followed from them. Comte, convinced of the genuinely biological nature of these inductions, accepted them without question, and based his sociological structure upon them. He found, however, as he continued his philosophical progress that they were not of a truly biological nature. He transferred them, in consequence, to sociology. Further analysis revealed the necessity of another transference. The study of affective life became the foundation of a seventh abstract science, leaving to sociology only the intellect and the activity. But these elements, too, in their turn, were finally discovered to lie outside the domain of sociology, which studies only their *results*, and not the elements themselves. Hence the final removal of the entire problem of human nature to morals, the last science in the scientific hierarchy.

The plan of the projected volume on morals clearly indicates this last stage of philosophical progress. It was traversed, however, only at the very end of Comte's life, and consequently the changes that it implies in his work were never carried out. The course of his thought as a whole is the sole indication as to the nature of these changes. But it should be noted that in all this philosophical evolution the number of entirely new facts is very small. What is seen from time to time is in reality but a re-handling of the facts already known. In other words, Comte was striving to distinguish and to assign to their definitive categories the general phenomena of Psychics. The final result was the establishment of three modes of living, the vital, the societal, and the moral, each with its appropiate abstract science.

Societal dynamics, then, has nothing to do with the laws of the intellect or the activity, in so far as they are elements of the individual nature of man. Its purpose, on the contrary, is to discover the laws of the evolution of the two classes of collective cumulations: the results of the intellect and the results of the activity. The fact that these two classes of societal phenomena exist is the proof that there exist organic apparatuses for the coördination of sensations and movements. These apparatuses may be localized by the subjective method proper to the science that deals with them; and these localizations may be verified by biological research; but sociology is in no wise interested in these investigations. Its task is to find the conditions necessary for the operation of the societal process and the laws of the operation of this process once begun. When these statical conditions and dynamical laws have been found, the sociological elements can be set aside from the great problem of scientific analysis; the determination of the laws of moral, i. e. individual, phenomena will alone remain.

The next task, then, is to determine the laws governing the evolution of the two classes of collective cumulations, to discover the dynamical laws of sociology. The third part of this volume will be devoted to this effort; but before this investigation is entered upon, it will be well to arrive at a more precise conception of the nature of scientific law than has yet been done here, especially as regards the varieties of these laws, and the relative value of these varieties. The guide is once more Laffitte.[1]

The idea of law, says Laffitte, is presented under two distinct forms, distinct although at bottom equivalent. The first form is that which asserts "the regular dependence of one phenomenon with regard to another, or, better, the measure according to which the variations of one phenomenon are governed by the variations of another." Mathematicians distinguish precisely between the two phenomena by the employment of two expressions that indicate the position of each phenomenon in relation to the other. They call *independent variable* the one that varies or is made to vary arbitrarily, and *dependent variable* the one whose own variations are subordinated to the variations of the first. In the formula that determines the length of a circle in the light of the length of its radius, the independent variable is the radius and the dependent variable the circumference. The rôles are reversed when the radius is determined in the light of the circumference, but the relation, i. e. the law that connects the two phenomena, is always the same. Once this law, this relation, this regular dependence, is established, nothing is simpler than to foresee the consequences in a given case, and thus to make provision for them or resign oneself to them. If it is possible to influence the independent variable, the dependent variable is altered in consequence; and thus men are able to bring about conditions favorable to their purposes. For example, the length of a given body may be increased or diminished by increasing or diminishing its temperature; the function of the urinary apparatus is modified by modifying the functions of the circulatory apparatus; certain acts are determined by exciting or developing certain feelings. When the independent variable is beyond man's control, resignation is the only possible course.

Obviously, not all phenomena whatever are related to all others by a regular dependence. This relation exists only between a certain number of them, so that as regards all others, the phenomena are independent. Thus the volume of bodies is independent of their color or their electrical condition; the intelligence of animals is independent of their weight. On the contrary, a phenomenon may depend on many others; a dependent variable, that is, can depend on many independent variables. This is the condition that is met with in the higher degrees of the scientific hierarchy. It is, in fact, this complication that is the reason for the immense difficulty that the study of these higher phenomena presents. The mind of man is not capable of seizing at one effort the sum of the relations that bind one phenomenon to many others. All that can be done is to divide and analyze these phenomena and consider them in succession, two at a time. In these cases, the mind is reduced to the necessity of expressing as the law of a given phenomenon what is really only its particular relation with the most important of the phenomena to which it is related; to connect it, that is, with its principal independent variable. When this relation is established, an abstract law exists.

---

[1] COURS DE PHILOSOPHIE PREMIÈRE, I, pp. 168-183.

The second form of law results from the establishment of constancy in the midst of variety. This form is essentially identical with the first, although not always reducible to it. It is in mathematics, the domain of simple examples par excellence, that this equivalence is best shown. The law just cited governing the relations between the radius and the circumference of a circle may take both forms. In the first form, it reads: the circumference of a circle varies in proportion to its radius. In the second form, it reads: the ratio of the circumference to the radius is constant. In the following example, the theorem takes the second form in its usual formulation: the sum of the angles of a triangle is equal to two right angles. Here it is the constant that is seized upon in the midst of variation. The first form is the following: in every triangle, any angle whatever is equal to the difference between two right angles and the sum of the other two angles of the triangle. There exist, then, laws that may be worded in both of the forms that the notion of law may take. Hence it is justifiable to say that in principle the two forms are equivalent. And this equivalence is not materially affected by the fact that there are laws that usually fall into the second form and can with difficulty be reduced to the first.

Now the distinction between these two forms of law corresponds in fact to a real distinction between laws themselves. There are two varieties of laws, answering to the two forms just discussed. To the first form—the relation between two variables—correspond laws of succession; to the second form—constancy in variety—answer laws of similitude.

To find a law of similitude is to seize that which is constant and common to two different phenomena or beings, to two relations, or to two laws. It was a law of similitude that Newton found when he assimilated the law of gravitation to that of weight. It was a law of similitude by which Lavoisier brought the phenomena of combustion under the more general law of the phenomena of the combination of bodies, by showing that the burning of wood and the oxydization of copper are similar in themselves and differ only because of the differences in the bodies concerned. In both these cases, laws of succession were brought into relation by a comprehensive law of similitude. Usually, however, it is events and beings that are thus related, and not laws.

There is one important difference, however, between the two varieties of laws. The law of similitude does not permit, as does the law of succession, of direct prevision; but it renders this invaluable service that it brings under the operation of known laws of succession phenomena that at first sight did not seem to be so governed. It is because the law of similitude does not permit of prevision and therefore of provision that it has less value than the law of succession. It is the latter that, because it allows of prevision, deserves to be called the true scientific law. There is harmony between the two classes, but the second holds the higher place. The laws of similitude prepare laws of succession when they discover relations between phenomena up to that moment distinct, when they classify and connect phenomena. They complete laws of succession when they show an identity between one law of succession and another up to that moment independent. But whether they prepare or complete the laws of succession, they never replace the latter. Laws in the strict scientific sense are always laws of succession.

A final word is needed as to the degree of precision that can be attained in the expression of laws. Obviously, as laws are extended to more and more complex orders of phenomena they lose something of the clearness and exactness they possess in the mathematical order, the simplest of all. In the latter science only does law receive its perfect expression, because there only can phenomena be measured, i. e. their relation to a precise standard, taken as unity, can be found. Only there, too, is it possible to express phenomena in numbers, and formulate the relations between them by numerical combinations. The ideal situation, of course, would be one that allowed all phenomena and all relations between them to be expressed in a similar fashion.

For the present, this ideal situation is not within the attainment of Science, especially as regards social or moral phenomena. In this exigency, then, the admirable invention of Descartes, "the logic of images, comes to the aid of those who are striving to introduce a certain precision into the researches proper to the superior orders of phenomena. In fact, where the intensity only of phenomena is in question, there are few investigations that cannot be represented by an image. Descartes demonstrated the fact in geometry, and his successors have applied the idea to physics. In our day, the procedure is in current use in biology, in sociology, and even in morals. It is impossible to enumerate all the phenomena, human or social, to which has been applied, to measure their intensity, what is called the graphical method, that is to say, various moments of their duration are figured by proportional signs, the sum of which gives an image that speaks to the sight with incomparable precision."[1]

---

[1] Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, p. 181.

PART III

THE LAWS OF SOCIETAL DYNAMICS

The goal of Part Three, it may be repeated, is to reveal order in the results of the process of continuous collective cumulation, in the unceasing movement of societal phenomena,—not in the vague mass of facts called 'social.' The word 'social' has been here definitely eliminated from the abstract sociological vocabulary: what is sought for is something far more precise, something that results from an indispensable preliminary analysis.

This analysis was begun in the preceding chapter by a division of societal phenomena into thoughts and acts; it is continued here by a similar analysis of the first of these two classes, whereby it appears that there are subdivisions of thoughts, of which one is determinative of the others. This class is that which Comte termed 'the theoretical reason,' and it ultimately determines the evolution of the other two, the practical and the concrete. Here then is the place where analysis shows that the law of movement must be sought.

To seek for it is the task of the chapter. The task is simplified of course by the work of Comte, on whose meditations and inductions the present chapter rests. The first result is the Law of Increasing Objectivity, which explains the course of human thinking through three or any number of "states," closely interlinked, and indeed growing out of one another as the 'mass' of cumulations increases.

The second result is the complementary Law of Successive Positivity, which makes clear why it is that an equal 'mass' of cumulations does not produce the same objective result when the subjects involved differ in generality.

The combination of these two laws into a single statement gives the foundation for an explanation of the development of human thought.

CHAPTER VIII.

The Law of Increasing Objectivity

THE dynamical laws of sociology deal, as has been shown in the preceding chapter, not with the development of societal phenomena in general but with the laws of the successive changes revealed by the two classes of sociological facts: thoughts and acts. The order in which these classes should be treated is indicated by the spontaneous arrangement of empirical sociological induction, which always puts thoughts before acts. The first law to be presented then is that revealed by the continuous succession of opinions: the law of the filiation of collective cumulations of thoughts.

Before attempting directly the establishment of a law of the evolution of thought, there is, however, a preliminary inquiry that must be made, namely: Is there not a possibility of making a classification of thoughts? Is there not a hierarchy in this division of collective cumulations? Have all the phenomena of this group an equal value? Do not some of these phenomena control and determine others?

An inductive study of the first division of the domain of dynamics is indispensable to the solving of the problem just formulated. If the conception of societal laws remains somewhat vague at the present time, if there is a general hesitation to accept the very idea of a sociological law, the fact is due, in large measure, to the neglect of the very investigation here proposed.

The induction necessary for the classification of thoughts is too vast to be within the power of any single mind, however great. Happily, such an effort is not necessary. The classification desired has been effected spontaneously by the very societal process that it serves to explain. Here then is the place to give greater precision to this consideration, mentioned already in the preceding chapter.

Sociological investigation did not begin only at the moment when the word 'sociology' was formulated to apply to a new science. At all times there have been spontaneous inductions in regard to societal affairs, just as there were inductions in regard to chemistry long before there was an abstract science of chemistry. These collective cumulations in regard to societal life are the results of centuries of observation; they date from the very beginning of society. Now in the development of any science whatever, there always comes a time when the mass of collective cumulations becomes so great as to force men to change their opinions, to move to new ground. This mass of cumulations compels them to form systematic inductions that differ from the earlier spontaneous inductions only in that the first are based upon scientific methods and the second upon empirical methods.

The societal process abandoned for the first time, in the case of sociology, the spontaneous form of induction for the systematic form of conscious application of scientific method, with Auguste Comte. The spontaneous induction it was that had laid the foundation for the distinction that Comte systematized between the abstract and the concrete sciences. This distinction had been developing for centuries; Comte did but develop it and reveal all its implications. It is the same process, first spontaneous and then systematic, that resulted in the classification of the collective cumulations of thoughts here sought for.

The results of this vast induction can be expressed as follows: There are three classes in that division of societal dynamics which is devoted to thoughts. The first class includes those collective cumulations that are derived from the relations of man with specific and particular things, with individual beings, animated or inert. These cumulations result directly from the efforts of man to modify these things, these beings, for personal ends. The third class embraces those collective cumulations that deal with the world in the broadest sense, with that ensemble composed of the totality of the phenomena observable by man. The cumulations of this class result from all the efforts made to understand the essential nature of the universe. An intermediate second class exists between these two extreme classes. This second class comprises those collective cumulations that result from the consideration of abstract beings, i. e., beings envisaged neither as entirely isolated nor as connected with the whole sum of things, but as members of a class . This second class then is composed of facts common to a number of inert or animated beings that possess, in the light of experience, similarities sufficiently marked to justify their being placed in a single category. Thus there are three classes of collective cumulations of thought,—classes whence result, in the terms of Comte, the practical reason, the concrete reason, and the abstract reason. And this division is but the systematic presentation of the results of centuries of spontaneous classification.

With this result in view, it is possible to advance to the question: Are these three classes of collective cumulations of equal importance? or, on the contrary, does one of them in the last analysis serve to systematize the others? Obviously, if such a class exists, the laws of its evolution will ultimately govern the evolution of all the others, by determining the methods by which they are envisaged. Here, then, is the first investigation that this chapter must undertake. The solution of the problem can result only from an exhaustive examination of the nature of the three classes defined above. Happily, this indispensable investigation has been essentially accomplished in the second chapter of this volume, in the section devoted to the explanation of the 'state of reason.' When the ideas there presented have been given somewhat greater precision, then the relative importance of the three classes of collective cumulations of thoughts will be easily determined.

The cumulations of the first class arise from the direct relations of man with determinate and particular beings. The thoughts of a human or animal being touching a particular object are immediately verified or corrected by its attempts to make use of it. These thoughts, corrected or verified, become, with the passing of time, collective cumulations of the first class. But these cumulations are always special, and for this reason their utility is, in general, limited to a single minute group or to a single individual.

The cumulations of the third class arise from efforts to explain the nature of the universe, to grasp the conditions of the existence of things, without any idea of a practical purpose or of an immediate application. The generality of the preceding remark should not be allowed to conceal the fact that efforts of this kind have been made in all periods and at all stages of societal development. Only, at the lower stages of the evolution of sociality, these efforts to understand the nature of the universe have been so spontaneous and so unconscious that they have passed unperceived. Yet a moment's reflection will show that some theory of the universe is implied in every societal act. Otherwise coöperative activity would be impossible. The distinguishing characteristic of this third class of cumulations of thoughts consists, then, in the fact that they set aside the special and particular conditions that hide from view the elements common to different cases, and so make it impossible to comprehend their fundamental aspects. Hence this abstract reason, this third class of cumulations of thought, may be considered as the result of collective efforts to understand the essential conditions of existence of the universe. It should, however, be remembered that this definition is based upon a process at last become entirely conscious, and not upon the first beginnings of the process. The abstract reason always strives to see things as a whole, without regard to any special case whatever. Striving to construct a general picture of the universe as a whole, it must provide for each constituent element its proper but subordinate place in a coördinated synthesis. Hence the decisive character of the third class of cumulations of collective thinking is its power of coördination.

It is this power of coördination that gives to the abstract reason its social influence, because it permits of the modification of things at the same time that it makes possible coöperation between men. A man without some general theory, no matter how imperfect, would have to consider each object in his environment as a thing entirely new and independent; men without essentially analogous theories as to the general nature of the universe could not work together for a common purpose. The abstract reason is, then, the condition of success for those efforts of men that tend to modify the material world. It is also the condition of the coöperation of generations, past, present, and future—and it renders this coöperation possible because its elements change very much more slowly than these generations themselves.

The second class of collective cumulations of thought, the concrete reason, serves as an intermediary between the two extreme classes, and makes more easy the transition from the particular facts, the special items of information, of the first, to the general theory of the third. Obviously, the continuous exercise of the intellect, even of a very primitive order, will reveal similarities between the things with which it deals; and ultimately the operations on any particular thing will be performed in the light of the properties common to the group to which the thing belongs. The concrete reason thus comes to direct the exercise of the practical reason. Now the properties common to a group are of necessity comprised among the properties of the world as a whole. The concrete reason must therefore always be in harmony with the abstract reason as well as with the practical reason.

In consequence, there is an enchainment of these three classes of cumulations; and it is the third class, the abstract reason, which regulates, in the last analysis, the changes in the other classes by virtue of its power of coördination. The cumulations of the first class are constantly increasing in number; they grow to the point of forcing changes in the third class; but the increase in the number of practical cumulations, although it conditions the development of the abstract cumulations, does not determine it. The augmentation of the practical cumulations makes possible and even necessary changes in the abstract cumulations; but it in no wise determines the nature and the direction of this development. On the contrary, changes in the abstract reason influence the exercise of the practical reason to the extent that new methods of coördination make action upon the environment more possible and more easy. The concrete reason does but follow the developments of the two other classes.

The final object of a scientific study of the collective cumulations of thoughts is therefore the discovery of the law that controls the evolution of the third class of cumulations, the class that deals with the general theories of the world. The cumulations of this class, since they control the cumulations of the other two classes, constitute the forces that coördinate thoughts, the first of the two categories of societal phenomena. Since, therefore, every change in the conception that man forms of the universe involves a modification in his manner of acting and thinking, the law that is revealed by a study of the third category of thoughts will be the law that in the last analysis is determinative of the evolution of the two other categories. In other words, the law of what Comte called the abstract reason is the fundamental law of the first division of sociological dynamics.

What then is this law, revealed by the abstract reason, which involves corresponding changes in the concrete reason as well as the practical reason, that is to say, in the whole body of thought? Obviously the answer to this question can be the result only of induction. But upon what data should this induction be based? This problem is rendered easy by the work of Comte. An induction of the kind referred to should be based upon the history of those branches of investigation that have become the most highly developed and perfected. It is, in fact those systematized results of inquiry now universally known as the sciences that supply the most satisfactory data for the induction mentioned, and especially the sciences that compose the general division of phenomena to which the name of Physics has been applied in chapter three. The development of these sciences is more accessible to investigation than is the evolution of mathematics, because it has taken place in the historical period and its principal stages have, in consequence, have recorded. It is the physical sciences that serve almost exclusively as the basis of the inductive investigation in question here. Logic and Psychics do but give verifications of the conclusions obtained from the study of the evolution of Physics.

If now, in accordance with the thought of the preceding paragraph, attention be turned to the development of the methods that have led to the constitution of Physics, i. e. of astronomy, physics proper, and chemistry, it will be observed that the same methods have, in each case, brought about the systematization of collective cumulations of thought. These methods, in fact, constitute a regular series of successive coördinations.

The first of these methods grows inevitably from the biological nature of the organism. A word as to this conception. Observations are necessary for the making of a theory, even the simplest; but observations are impossible without some theory to coördinate them, otherwise an experience is but an isolated fact, devoid of significance. Primitive intellectual effort seems, then, condemned to remain enclosed in a circle without an issue. From this impasse, the most humble intellects, even among the animals, are rescued by their possession of a spontaneous logical method, perfectly in accordance with the needs and means of the situation. This initial method, from the point of view of man, "consists in transporting everywhere the human type, by conceiving of all phenomena as produced by wills analogous to our own and ordinarily superior only in proportion to their effects," and with the supposition "that these affections are essentially related to our destiny. . . . Whence at once results a provisional harmony between man and the world." [1]

In other terms, the animal *Homo*, in this primitive stage of intelligence, in which activity is identified with vitality, is driven by the operations of his own individuality to attribute to the exterior world a nature analogous to that of the interior world. Consequently, his method for transforming his experiences into coördinated observations consists in attributing to the world *wills* as natural as his own. The primitive human animal, conscious of the operation of his own mind, and finding there the causes of his actions,[2] strives to find similar causes for the actions of the beings that surround him. His method is the more rational in that it applies perfectly to the explanation of the actions of that part of his environment that is of most importance to him, namely, the animals that are his fellows. *The first method of coördinating the intellectual collective cumulations of the third class, i. e. the abstract reason, is then the method of causality, based upon the assumed exis-*

---

[1] Pol. Pos., III, pp. 28-29; Eng. tr., III, p. 24.

[2] Does he not find here also the reason for the metaphysical conception of 'cause'? Is this conception anything but the attribution to the universe of the impulses that activate man, those impulses in which he finds the ultimate explanation for the activity which characterizes him?

tence of natural wills, and it is needless to say that it is wholly subjective.

Such is the first method of coördinating collective cumulations, and its spontaneity, its simplicity—one might almost say its artlessness—make it perfectly adapted to the individual possessing no other means of coördination and having no information of a reliable kind. It does nevertheless serve to link together the collective cumulations that are developed by successive generations.

The final method—final so far as scientific progress allows of any prevision of the future—is entirely different from that just described. In quite another manner it coördinates the observations of human experience. This type of coördination instead of being subjective and spontaneous is objective and systematic. It presents a firmly organized method, for which no alternative can today be seen; it coördinates and systematizes the societal facts of the first division, i. e. thoughts, according to the relations objectively discovered in the exterior world. The growing mass of cumulations of thinking allows of the discovery of certain properties common to different bodies, and the societal process widens and deepens the knowledge of these properties. Hence the establishment of precise abstract relations between abstract properties and abstract phenomena, the sum total of which constitutes a fund of common ideas. An abstract relation once established between two phenomena, prevision becomes possible and the modification of one of them.[1] In this way, the exterior world ceases to be coördinated in the light of the interior world, and is coördinated in the light of the relations established by the study of objective phenomena. The ultimate purpose of this type of coördination is no longer to propitiate the wills of any beings whatever but to "subordinate the subjective to the objective sufficiently for the logical order to represent the physical order in such a manner as to enable observation to be suitably replaced by reflection."[2]

In this stage of his evolution, in which activity is clearly distinguished from vitality, the societal product Man, guided by the collective cumulations resulting from centuries of intellectual effort, discovers the abstract relations that exist in the world without. In consequence, his method of coördinating his observations is the formulation of natural laws. The existence of such laws in a single group of phenomena once established, he strives to learn the laws of other groups; and a complete knowledge of these laws becomes the goal of his efforts. *This method of coördination is thus the method of positivity, based upon the demonstrated existence of natural laws, and it is, in theory, entirely objective.*

But a difficulty arises here. These two methods differ so profoundly that it is impossible to see how there can be any filiation between them. A middle term is necessary to connect them. Induction, based upon the history of the sciences, demonstrates that this middle term is produced in the following manner: With the development of collective cumulations, a change is effected in the manner in which the directive wills are conceived. In the first period, they are attributed directly to the bodies whose phenomena they serve to explain; but in the intermediate stage under discussion they are attributed to beings independent of the different existences that each governs without being restricted to any definite seat. "The intellect passes from the study of beings to that of properies and events; but the habits it formed in the first period of referring everything to a real cause allows it to lay aside its fetishes only to create fictive beings, to which it attributes the cause of the phenomena observed. The tree loses its prestige, but it yields its place only to the god of the forest. Love, beauty, silence, disease, health, in a word, all the abstract notions, spring one by one from the human brain, which gives them form, color, bearing, accordant with the properties it endows them with; and the subjective being, clothed with the material attributes that make of it a real being, differs from the fetish only in the degree of its power and the extent of its domain."[1]

---

[1] Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, pp. 54-55.

[2] POL. POS., III, p. 27; Eng. tr., III, p. 23.

This change once begun continues by reducing the number of fictive beings from many to one, or, more accurately, by transferring the sovereignty of a number to a single one, for whom the others then become the chief ministers. The transition between the two stages is complete when the search for causes is carried on by the substitution of systematic entities for spontaneous deities. The very indetermination of these conceptions becomes the natural source of their usefulness as transitional types, for each entity can be envisaged as the spiritual deity whom it replaces or as the generalized phenomenon it designates, and so can be accepted with equal readiness by minds that differ widely as regards their real beliefs.

Thus the history of any group whatever of collective cumulations that has reached the state of positivity reveals a succession of states in which each of the methods of coördination just defined is employed in its turn. Considered from the point of view of logical method, there is a succession: first causality, second causality, positivity. *From the point of view of explanation there is a succession: natural wills, supernatural wills, natural laws.* There is also a succession from the point of view of the results obtained, which are first subjective, then subjective-objective, and finally objective. If the induction is extended from the history of the sciences to the history of man, there is a succession: fetishism, theologism, positivism. If the induction is limited to the development of any individual mind, there is once more a succession. Each understanding presents a succession of three states: fictive, abstract, and positive. And the formulation just given is the first part of the final presentation that Comte made of his famous Law of the Three States, the discovery of which enabled him to construct his science of sociology.

Here then is the place for a brief account of the philosophical development that led Comte to the final formulation of his first dynamical law of sociology. Striving to reduce politics to a science, he studied the evolution of the sciences that had attained the highest point of development. These sciences were in fact the physical sciences, which had become positive towards the end of the eighteenth century. As a result of his study of the physical sciences, Comte arrived at the induction that each of these sciences had had an analogous development. The induction was first presented in his opuscule of 1822, where it took the following form: "By the very nature of the human mind, each branch of knowledge of necessity passes, in its development, through three different theoretical states: the theological or fictive state; the metaphysical or abstract state; finally, the positive or scientific state." [1] Hence the conclusion—the source of the *Positive Philosophy*— that political theories would have to pass through the same series of changes before they would reach the scientific plane.

---

[1] Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, pp. 74-75.

This fundamental law of sociology received many improvements at Comte's hands. He developed it in his *Philosophical Considerations on Sciences and Scientists* of 1825. He expanded it in the first and fourth volumes of the *Positive Philosophy*. He gave it a detailed analysis in the first chapter of the *Social Dynamics*, the third volume of the *Positive Politics*. Finally, in the fourth volume of this work, in the third chapter, Comte made it one of the fifteen universal laws on which the entire positive dogma rests. [2]

Now in all these formulations, the law of the three states is a law of similitude, as defined in the preceding chapter. All the sciences, it says in effect, are similar in their development; all minds are similar in their development. Take, for example, the statement of the law as it appears in the *Social Dynamics*. "Integrally conceived of, the fundamental law of intellectual evolution consists in the necessary passage of all human theories through three successive states. The first, theological or fictive, is always provisional; the second, metaphysical or abstract, is purely transitional; and the third, positive or scientific, is alone definitive."[3] In short, this law of the three states is a law of similitude revealed by an inductive study of all human theories. They are all similar in that they all pass through the same states.

Hitherto, every formulation of this law has made of it a law of similitude, i. e. the statement of a certain constancy discovered in the midst of variety. There is a similarity of progression in all branches of learning; there is a similarity of development in all minds; there are similarities of method in all coördinations of knowledge; there are, in all periods, similarities to be observed in the efforts to reduce the totality of facts to a logically consistent whole. But there is not, in any of these cases, a true law of succession. Undoubtedly, there is to be observed, in all the sciences, a similarity between the methods successively employed to coördinate the facts proper to each science; but the statement of the fact is not the determination of the law that governs this regular succession of methods. To say that all the masses of collective cumulations centering about the seven abstract sciences have been coördinated successively by the same series of methods is not to give the law that governs the evolution of all collective cumulations whatever. The law of similitude, it has been said, may precede and prepare the law of succession, but the one can not replace the other. The applicability of this principle to the law of the three states is clear. But is it possible to transform this law of similitude into a law of succession? Can it be expressed as a relation between two variables? Is it possible to state it as the measure according to which the variations of one phenomenon are governed by the variations of another?

---

[1] Pol. Pos., IV, app. p. 77; Eng. tr. IV, p. 547. *Plan des Travaux, scientifiques nécessaires pour réorganiser la Société.*

[2] Comte gave the name "First Philosophy" to fifteen laws that differ from all others in that they apply indifferently to all phenomena whatever and not to certain categories only. See Pol. Pos. IV, pp. 170-180; Eng. tr., IV, pp. 150-160.

[3] Pol. Pos., III, 28.

A simple illustration will show that the change can be made. It is entirely possible to make of this law of similitude a law of succession that will apply to the continuous process of collective cumulation. If a geometer wishes to determine the trajectory of a moving point, he begins by determining several of the positions that it must occupy.[1] Once these are determined, the general direction of the curve is clear: more special needs may necessitate the determination of a greater number of the positions that the point will occupy; but the general direction is determined once for all by the first set of points.

It was these indispensable positions of the societal movement that Comte determined in his law of the three states. The whole history of the law during the thirty years that Comte dealt with it may be summed up in the statement that each change in its formulation marks an advance in the accuracy with which the essential positions were determined. These positions were determined approximately by the original form of the law; the curve that these first points determined rose much more rapidly, especially in its initial stage, than it was afterwards found to do. In other words, Comte failed to grasp, at the beginning of his work, the full significance of the period of fetishism, either as to its duration or as to its influence upon the later stages of societal development. In fact, he had to write the whole of his *Social Dynamics* to reach a just appreciation of this first state.

As his thought became more mature, Comte increased the number as well as the accuracy of the positions of the moving societal point. The original three were not only determined more precisely, but others were established; and finally a series of five points was developed—a number that could be increased in case of need. Indeed, once the decomposition of the societal movement into fetishism and positivism is replaced by the progression: fetishism, theologism, positivism, there is no limit to the number of terms that may be developed by the interpolation of a middle term between any two successive members of the series. Comte himself afforded a striking example of the extension of the original series when he wrote the following words: "Even if the human mind attains full maturity by passing through the various states, theological, metaphysical, scientific, the qualification of definitive can not, however, be accorded to the last named state. It is necessary, in fact, to decompose it finally into two successive modes, the one scientific, the other philosophical, respectively analytical and synthetical."[1] The law, expressed in the form that has the most general application, presents a series of five states: the fetishist, the polytheistic, the monotheistic, the scientific, and the positive. Obviously, the central progression of this formulation results from an analysis of the theologism of the original form into three stages in order to render more comprehensible the transition from fetishism to positivism.[2]

---

[1] See LA REVUE OCCIDENTALE for March, 1900, pp. 141-158. O. d'Aranjo, *Le concept scientifique des lois sociologiques.*

There is another reason for the retention of the form of the law that makes it a series of five states, namely its immediate and easy application to the development of man. Originally, it was the contemplation of human history alone that gave rise to the law in its first form: theological, metaphysical, scientific states. With continued meditation, Comte saw that this form of the law completely omitted the steps that the animal *Homo* traversed in common with the other animals. Hence he made a radical change in his original formulation of the law by adding to it an entirely new term in order to include the primordial state of societal evolution. The law then assumed the following form, which is the most comprehensive statement possible: fetishism, theologism, positivism. This progression may be expanded, as has been seen, into a series by the intercalation of intermediate states, but its three points fix once for all the general direction of the curve that represents the movement of the process of collective cumulation of thoughts.

The intercalation of intermediate points between the three that determine the direction of the curve, i. e. an augmentation of the number of 'states,' makes possible an advance in the study of societal evolution. Instead of the effort to define the various states, the attention can now be turned to the discovery of the essential nature of the continuous process that produces these states. That is to say, it is at last possible to cease studyng the results of the process and to concentrate effort upon the process itself. The law of similitude, no longer the center of interest, yields place to the law of succession. The process of continuous cumulation of collective thinking produces, with the passing of time, successive differences, clearly marked, in the nature of the cumulations that result from it. What, then, is the law regulating the appearance of these differences? The process is always in operation; the differences between cumulations are but the most striking results of its operation. What is the law of the process itself?

---

[1] G. Audiffrent, AUGUSTE COMTE, NOTICE SUR SA VIE ET SA DOCTRINE, Paris, 1894, p. 174.

[2] It will be observed that the term 'metaphysical' has disappeared from the formulation given in the text. The following passage from Comte will explain, if not justify, this alteration of the original form of the law: "Every influence of the metaphysical spirit is really exerted towards the dissolution of the theological spirit, without replacing it in any sense, because of its impotence to create anything." POL. POS., III, p. 39; Eng. tr., III, p. 32.

The preceding chapter has shown that a law of succession results only from a relation between two variables, the one independent, the other dependent. The determination of these two variables is therefore the first task to be undertaken, and of these the independent variable is the more important. What is the independent variable on which depends the law of succession revealed by a study of the continuous cumulation of the collective results of the exercise of the intellect?

The answer to this question cannot long remain in doubt. The result of the societal process is an uninterrupted increase of collective cumulations, a constant growth of thoughts and thought. The nature of this increase, however, demands consideration. It is not only the *number* of cumulations of thought that increases; what increases is what can only be called the *mass* of cumulations.[1] The thought involved here is clearly indicated in every-day language when it is said that conclusions are 'forced' upon men; when certain arguments are said to have 'weight'; when men are 'driven' in a certain direction; when a theory 'imposes' itself upon the mind; when a course of reasoning cannot be 'resisted.' These expressions are not merely figures of speech; they are statements of reality. They designate a phenomenon that can only be described in mathematical terms. A single fact has but little power of this kind; ten facts, a hundred facts, have much of it. Ten facts are not ten times as conclusive as one fact, they are fifty times as conclusive. A hundred analogous facts 'force' the mind in a given direction. The conception of 'mass,' therefore, may legitimately be extended to the conceptions of sociology; and it can be said that not only does the number of collective cumulations of thought increase constantly, but their mass augments as well.

This conception of mass in relation to sociological dynamics will meet with less opposition if the abstract nature of societal phenomena is carefully kept in mind. There is here no reference to any period whatever nor to any particular individual. Nothing is in question but the continuous operation of an abstract process. A given historical period may reveal hesitation or delay in accomplishing a stage of intellectual evolution; a given man may remain entirely blind to the indications of the societal movement; another man, endowed with what is called genius, will precede his generation or his century in the path of investigation. But these examples are all concrete. They are not to the point in the present investigation. What is important here is that the successive results of the societal process always end, sooner or later, by imposing themselves upon the minds of men. They force the intellect from one logical position to another. It is in fact the 'weight,' the 'gravity' of the mass of facts existent in a given historical period that explains the incontestable circumstance that no important societal advance is ever entirely due to a single individual. Several thinkers are often on the point of making the same discovery. The history of Science is conclusive on the point. From the abstract point of view, then, there is no exception to the statement: the mass of collective cumulations of thought constantly increases.

---

[1] "There is a notion that I was, I believe, the first to introduce explicity into sociology: it is that of mass. It is clear, in fact, that in the actions and reactions manifested by the two forms of coöperation [simultaneous between contemporaries or successive in the light of ancestors] the number of coöperating individuals obviously plays a considerable role, and that it must be taken into account in order to evaluate the intensity of action and reaction." Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, II, p. 138.

The conception of Laffitte is evidently much more concrete than that set forth in the text above. In any case, the two ideas are but different formulations of Comte's thought: The living are more and more governed by the dead. The whole point of the formulation in the next lies in its transporting the conception of 'mass' from numbers of individuals to numbers of collective cumulations. One creative mind is in this respect of vastly greater weight than a thousand mediocrities.

Here, therefore, is the independent variable required for the law of succession that controls the evolution of the first class of societal phenomena: the collective cumulations of thoughts. The dependent variable is no less certain. Comte clearly defines it when he says: "The improvement of speculation should be reduced to the greater and greater submission of the within to the without." "In proportion as our observations are developed, we are forced to complicate our theories in order to obtain an adequate representation" of the objects of observation. "Thus the whole of the intellectual movement consists in a better and better representation of the exterior spectacle by virtue of the gradual complication of interior conceptions."[1] Here, then, is the dependent variable of the law. The collective cumulations of thought are ever more and more objective. They tend always to become a faithful picture of the objects with which they are concerned. The world within, by reason of the efforts accumulated through the centuries by the totality of sociable beings, is unceasingly being subordinated to the world without.

The combination of these two variables will give the fundamental law revealed by the inductive study of all collective cumulations of thoughts. It can be formulated as follows: *The objectivity of the cumulations resulting from the collective operation of intellects increases with their mass.*[2] Such is the law of the filiation of societal phenomena of the first class. It will be referred to hereafter as the Law of Increasing Objectivity.

---

[1] Pol. Pos., III, pp. 22-23; Eng. tr., III, p. 19.

[2] "Powerless to bring all facts within its grasp, our mind is forced to express as the law of a phenomenon, what is only its particular relation with the most important of the phenomena with which it is connected, i. e. with its principal independent variable. This is the case for the majority of sociological laws, in which, because of our inability to know the entire mass of conditions, multiple as they are, that influence social phenomena, we strive to consider the latter as above all a function of *time*, which is their capital condition. Time is then the independent variable in the law of the three states, for example." Laffitte, Cours de Philosophie première, I, p. 172.

But this conception of Laffitte's, in addition to its neglect of the division established by Comte of 'social' into collective and individual, would destroy all possibility of modifying societal development. Man can not effect changes in time; but he can certainly do so in the mass of cumulations, since the knowledge of the statical conditions of the operation of the societal process enables him to augment this mass and so to hasten the development of sociality.

The law of the three states, basis of the law of increasing objectivity, has never met but a single truly penetrating objection. How, it has been asked, explain the coexistence, in the same mind, of the three states? The question does not lack a certain point, for nothing is more certain than the simultaneous existence in one mind or in a given historical period of the three methods of coördinating phenomena that the law of the three states indicates. It should be noted in the first place that the objection applies to the law of the three states and not to the law of increasing objectivity; that it affects the law of the societal process in its form as a law of similitude and not in its form as a law of succession. It is possible, nevertheless, to transform the objection to the law of the three states into the following question which is not without application to the law of increasing objectivity: Why are there variations in the degree of objectivity characterizing different groups of phenomena when the mass of cumulations of which each group is composed is, in fact, the same?

This objection, whatever its form, was foreseen by Comte, and he had answered it even before it was raised. The law of historical filiation, he said, referring to the law of the three states, must be complemented by the law of dogmatic classification; and he illustrated the relation between the two laws by saying that in the same night that he had discovered the law of the three states, he had, a few hours later, discovered the law of classification. He sets forth the necessity of this complementary law as follows: "After having established the fundamental filiation of all of our thoughts whatever, it will be necessary also to characterize the general order according to which our various theories become subject to it by virtue of their respective objects. Without such a complement, the study of the intellectual movement would remain insufficient to explain the historical variations of human opinions. The positive conception of our mental evolution finally demands, then, two distinct but inseparable laws: one, of filiation, common to all our theories; the other, of classification, which coördinates them according to their domains." [1]

But how is this law to be discovered? How are the principles to be found that will enable all the phenomena observable by man to be classified? Once again, in the course of this volume, the reader is in the presence of an immense induction, far beyond the power of any genius, however great. Once again the spontaneous operation of the societal process has furnished the basis for the systematic solution of the problem. The development of the sciences is the principal guide in the investigation. First, Logic, i. e. the mathematical sciences, developed. Then Physics was analyzed into its constituent elements. Finally Psychics was slowly taking form. Not only was the general movement well defined, but the sub-division of the first two groups had been operated. Here it was, in fact, that Comte found the guidance he sought. His task was to find the principle whose spontaneous operation had determined the separation of the various mathematical and physical sciences. The fundamental basis of his induction was in consequence the evolution of the sciences in the lower half of the scientific hierarchy.

---

[1] POL. POS., III, p. 17; Eng. tr., III, pp. 14-15.

It is particularly apparent in the light of this quotation how groundless is the attribution of Comte's law of the three states to earlier theorists. See, for example, Turgot's anticipation of the law in the translation of his Sorbonne discourse of 1750, ON THE PROGRESS OF THE HUMAN MIND, and the appendix to this translation. The Sociological Press, Hanover, N. H., 1929.

The principal factor in the evolution of the sciences composing Logic and Physics was the establishment of classes of specific and irreducible phenomena. The separation of phenomena into specific classes must depend upon the existence of irreducible differences between the phenomena in question. Hence there must exist an objective basis for the law of classification. In other words, man could not establish classes among phenomena if the phenomena did not essentially differ from one another. So Comte, studying all the efforts, spontaneous and systematic, ever made to classify the phenomena of the world, was led to his general principle of classification. He states it as follows: "When conceived of from the logical point of view, the order according to which our principal theories accomplish their fundamental evolution results necessarily from their mutual dependence. All the sciences can, no doubt, be sketched at the same time: their practical use even requires this simultaneous culture. But the latter can reach only the inductions proper to each class of speculations. Now this inductive up-growth can furnish adequate principles only in the case of the simplest studies. Everywhere else, they can be established only by subordinating each variety of scientific inductions to the whole sum of deductions emanating from the less complicated and therefore less dependent domains. In this way, our divers theories rest dogmatically one upon the other, following an invariable order, which must historically control their decisive advent, the more dependent having always had to develop the earlier."

"But this order of logical dependence can result only from the natural subordination of the corresponding phenomena. . . . The central difficulty of the second sociological law consists, then, in the determination of the natural order of dependence between the various phenomena. It is to be discovered in the light of the fundamental principle of decreasing generality or of increasing complexity." [1]

It is this principle, then, that explains at last why the mathematical sciences were the first to be reduced to law; why Physics was the second group of phenomena to be studied scientifically; why chemistry could not become positive before physics proper; why biology had to wait upon chemistry; why Psychics was not within the reach of law until all the sciences that precede it in the scientific scale had become positive. The operation of the same law explains also why social physics was developed after biology; and why Comte after long and difficult research had to recognize that he had committed an error at the beginning of his labors—an error that he had to rectify by the institution of a seventh and last science in the hierarchy.

---

[1] POL. POS., III, pp. 41-42; Eng. tr., III, pp. 34-35.

The appearance, in the work of Comte, of this new science is, in fact, the best example that could be selected to illustrate the inevitable operation of the law of classification. The fourth chapter of this volume has shown the successive stages by which Comte was led to the institution of a science to deal with individual phenomena. This conception took its first evident form in the first chapter of the *Social Statics;* and Comte was meditating, at the moment of his death, upon the details of the volume that was to have been devoted to this final science—a science that he considered, in the full light of the whole of his philosophical labors, as the most important of all the sciences of the abstract hierarchy. Note that Comte had never failed to recognize the importance in practical life of individual facts: he failed only to understand their logical position in the totality of observable phenomena. He considered them, even so late as the beginning of the *Positive Politics*, as biological.

But how explain the fact that Comte had been able for so many years to lose sight of a logical problem of so great importance? How explain the occurrence of a classification that subordinated moral and individual phenomena not only to sociology but to biology? What was the source of this error, the rectification of which required the reorganization of all the data of Psychics—a reorganization that is outlined in the third chapter of the last volume of the *Positive Politics?* The answer to these questions is easy in the light of the law of classification itself and the course of development that Comte's thought followed. Here is the place for the explanation of Comte's error, because it will throw light upon the law itself and at the same time remove the last difficulty that the works of the great philosopher present, namely, the transfer to the science of morals of the study of intellect and activity, i. e. the domain of sociology as it is defined in the *Social Dynamics*.

A passage from the *Social Statics* will afford an appropriate introduction to this explanation. In this passage, Comte is speaking of moral, intellectual, and physical laws. "The spontaneous drafting of all these laws necessarily goes back to the first exercise of human reason, stimulated as it always was by the corresponding needs. Despite their higher degree of complication, moral laws first absorbed the principal attention, as directly related to our most important cares, and even connected in a special manner with the two arts then of dominating importance, war and government. In all the poetical monuments of the lower civilizations, the empirical knowledge of moral laws is shown to be far advanced, at a time when material harmony had of necessity to remain unrecognized. Nevertheless, this spontaneous culture could found no durable construction, since moral laws were conceived by it as independent of physical laws, on which they necessarily depend. Thus the special development of the latter, by virtue of the corresponding activity, becomes the sole point of departure of our systematic evolution. The decisive construction of the positive dogma could commence only with the physical, and above all the mathematical, order, in view of its natural independence."[1]

In other words, the societal process of collective cumulation is in operation always and everywhere upon all branches of knowledge simultaneously. Spontaneous inductions are being made uninterruptedly in each department of Science. Chemical inductions, for example, long preceded the science of chemistry; sociological inductions existed before the science of sociology had even been conceived of. This empirical study necessarily concerned itself especially with the actions of individuals. The hunt, whether of animals or men, the relations of primitive chiefs with the members of their groups, the dealings of women with men and children, the study of the motives of man's actions by priests and poets—such are the inexhaustible sources of moral and individual knowledge, stored up in language, proverbs, poesy, and the "ancient wisdom." Here is the true source of the knowledge of human nature, the result of inductions, unsystematic it is true, but based upon facts the most indisputable in the world.[2] It was this moral science, developed from the epoch in which the animal *Homo* was becoming Man, that produced the classification of all human manifestations into three groups: thoughts, acts, and feelings—an empirical classification that under different forms was anterior to the abstract sciences.

But these moral and individual phenomena are the most complicated of all; they are the least general and the most variable of phenomena. Their scientific systematization had, therefore, to wait upon the reduction to law of the other specific categories of phenomena. The institution and the constitution of the inferior sciences preceded the positive study of morals. The mathematical and physical sciences, it need not be said, have but few direct relations with morals; but with the rise of biology, of biology as a natural science, of that biology which is the science of all the manifestations of living beings, the situation changed. This new science avidly seized upon the spontaneous inductions of morals and made them its own. It was to biology, therefore, it was believed, that men must go for a knowledge of human nature; and Comte, along with all other scientists and philosophers, sought in it the material for his theoretical constructions. Biology, it was affirmed, gives a knowledge of the brain; it must give us, in consequence, a knowledge of intellect, activity, and feeling. Such was the position of science at the beginning of the nineteenth century; and such was the error that cost Comte thirty years of arduous labor to correct.

---

[1] POL. POS., II, pp. 34-35; Eng. tr., II, pp. 31-32.

[2] "Psychostatics is the study of what is at once primitive and permanent in us, of what presides over the elaboration of all our acts, of what characterizes individuals, of what differentiates individualities. It has always been noticed that individuals differ from one another; a whole language of qualificatives has been created to express the thousand distinctions presented by temperaments and intellects; but an exact science of these differences remains to be constructed; psycho-statics, we are convinced, is the sole solid point of departure." Achille-Delmas and Boll, LA PERSONNALITÉ HUMAINE, p. 112.

Now the authors of LA PERSONNALITÉ HUMAINE have sought to build the science of individuality upon foundations derived from the study of pathology. In so doing, they seem to have committed the logical absurdity of constructing a pathology of individuality before having determined its normal and healthy state. It is the empirical knowedge referred to in the text above that has prevented them from being guilty of the inconsistency pointed out. As the English phrenologist George Combe said long ago: "Society, thanks to history and observation, possesses a fairly precise knowledge of human nature in general."

What is this error? It consists in this: Biology affords nothing but a knowledge of a biological organ the functions of which are originally unknown. It does not give us a knowledge of intellect, nor of activity, nor of feeling. Empirical moral induction centuries ago demonstrated the existence in man of thoughts, acts, and feelings. It was necessary to find the organ, the apparatus, the biological source of these moral manifestations. The brain became their seat only after centuries of investigation. In other words, the task of biology is not to give a knowledge of human nature, but to find organs for the functions whose existence is demonstrated by the inductions of the science of morals, the science of individual manifestations envisaged from the abstract point of view. Such is the position at which Comte arrived at the end of the *Positive Politics.* He had at last, and once for all, comprehended the bearing of his law of classification upon the analysis of the whole domain of Psychics.

In the light of this law of classification, then, biology should deal exclusively with vitality, sociology with sociality, and morals with individuality. Biology studies the continuous renewal of substance; sociology the continuous cumulation of collective products; morals the individual manifestations of organisms. Biology is concerned with the vital process; sociology with the societal process; morals with the process by which biological organisms, under societal influences, are individualized and moralized. The organic phenomena are the most general; the societal phenomena less general; the individual phenomena the least general of the three classes.

Once this division of the domain of Psychics had been accomplished, Comte clearly understood that sociology could in no wise include the study of any elements whatever of human nature. The knowledge of these fundamental elements, sources of individual manifestations, can be derived only from morals, the science above sociology in the scientific scale. Sociology could deal only with the "results" of the exercise of the elements of human nature, results to which had been given for centuries the names of thoughts and acts, i. e. collective cumulations. The existence of these words clearly indicates the necessity of the existence, in individual life, of elements to which these manifestations, these "results," might be attributed. But the discovery of these elements is not in the domain of sociology; it is the business of morals. In this way it was that Comte was led to think that not only the feelings, but also the intellect and the activity, in so far as they are fundamental elements of human nature, are all comprised in morals.

Here, once more, is the passage in which Comte expresses his conclusion. Speaking of the study of collective existence, first statical and then dynamical, i. e. of the science of sociology, he says: "In it one feels that since the special study of the intellect and the activity is therein separated from that of feeling, such special study allows of an appreciation of results only, *the source and destination of which belong to the science that follows it.* If this false position of the mind is not manifest in the treatise I am finishing, the fact is solely due to the circumstance that the elaboration of morals is therein spontaneously mingled with the construction of sociology."[1] The constituent elements of sociology and of morals had at last become distinct in Comte's mind. Sociology does not deal with the question of human nature; its domain consists solely of the cumulations of the results of the collective exercise of certain of these elements. It is in morals that must be sought the analysis that will reveal the sources of these individual manifestations.

In short, the difficulty with which Comte had struggled for thirty years is due to an inversion of the logical order of the sciences, i. e. to an infraction of the law of classification. Morals determines the elements of individuality; sociology verifies them; biology localizes them: here is the order imposed by the law of classification. Science, in Comte's time, was reversing this order; the science of today has not corrected this error. Comte alone has been able, up to the present, to escape the consequences of this inversion. Biology, sociology, morals: such are the categories of Psychics; they will become positive in this order and in this order only.

So concludes the exposition of the law of classification, complement of the law of filiation. It will here be called the Law of Successive Positivity. This law explains why the same mass of cumulations does not necessitate the same degree of objectivity. The combination of the two laws to which this chapter has been devoted will give the law of succession that regulates the evolution of thoughts: *The objectivity of the collective cumulations of thought varies with their mass and with the generality of the phenomena concerned.*[2]

---

[1] Pol. Pos., IV, p. 232; Eng. tr., IV, p. 205.

[2] Since the first of the two laws developed in this chapter requires the second as its necessary complement, the combination will be referred to, unless otherwise indicated, simply as the law of increasing objectivity.

Not only must man think; he must act as well; and if he is to act as Man, i. e. as a social being, he must do what he does in the presence, actual or constructive, and in the light of the actions of others. There results, therefore, a cumulation of acts; and these cumulations, taken as a whole, are not the acts of isolated units but of individuals combined as a group. There is thus an end toward which the group as a whole strives, of which the individual member may or may not be conscious.

And more. Not only are the activities maintaining group existence coördinated by having a certain end, but the historical record shows a wide variation in the nature of these ends. In the course of the societal movement, groups have been spontaneously organized for the attainment of widely different goals, of which individual members become aware in the overwhelming majority of cases only long after the main lines of action have been determined once for all.

To discover the law of succession of the ends for which groups are organized (i. e. by which the activities of individual members are coördinated), is the purpose of this chapter, developed according to the plan set forth on page 158.

The outcome of the inquiry is the Law of Growing Productivity, in which is to be found a conception that corrects and reconciles the intellectual and the economic interpretations of history and advances still further the explanation of the course of human development.

CHAPTER IX.

The Law of Growing Productivity

THE preceding chapter has formulated the law that governs the first of the two classes of collective cumulations: thoughts, i. e. the cumulated results of the collective exercise of the intellectual faculties. This law of the filiation of opinions, of increasing objectivity, is the basis of what is sometimes called the intellectual interpretation of history. This method of explaining historical facts consists in attributing to the development of the mind, to mental progress, the influence that in the last analysis determines the course of humanity. Since the very beginning of the serious study of history, philosophers and savants have followed this method: they have agreed, almost unanimously, up to the last century, to attribute to the evolution of thought the motive force in the historical movement. The history of thought has been a synonym of the history of civilization.

The rise, during the last century, of a theory that seeks to explain the historical movement by the operation of economic factors alone, has put in question the validity of the purely intellectual explanation of the events of history. Historical materialism, economic determinism, the economic interpretation of history—different forms of the same idea—have vigorously combatted the exclusively intellectual conception of civilization. The mass of facts, often unknown or unregarded, that the economic school has brought to light, has shaken the position of the partisans of the intellectual school. The cause of phenomena so diverse as war, science, philosophy, religion, literature, art, music even, has been, not without real plausibility, attributed to the operation of factors other than the advance of thought. There has been a determined effort to complement the results of the intellectual interpretation of history by an economic or material explanation, and even to replace the one by the other.

Science, abstract and positive, interposes itself into this debate between the partisans of the two opposed methods of historical appreciation. First, as regards the method followed by each of these schools, it emphasizes the concrete nature of the problems that each school seeks to solve. All the questions raised in the name of the one or the other of these opposed historical methods require the simultaneous consideration of a great variety of facts belonging to various abstract sciences; they mingle and confuse the biological, sociological, moral, and even cosmological elements of the problem. It might, without exaggeration, be said that in general the partisans of the two schools are ignorant of the distinctions between the various classes of abstract phenomena represented by the hierarchy of the sciences. Consequently they are forced to deal with entirely concrete problems. The results of such confusion can easily be imagined. The most elementary rules of scientific method demand a clear distinction between all the factors of any historical situation whatever, and the separate appreciation of each. The positive method demonstrates the impossibility of solving, without a preliminary simplification, problems so complex as those involved in the untangling of the complicated network of historical facts.

In the next place, the abstract and positive science of sociology explains the origin of these two methods of historical appreciation, and so puts an end to the sterile debates that embarrass the scientific study of history. And, in addition, it makes possible the incorporation into a single body of knowledge of the sound results of each of the two opposed schools. Sociology, the science of the process of collective cumulation, establishes inductively the existence of two great classes of societal phenomena: thoughts and acts, the combination of which produces the sociological environment. The intellectual school of historical interpretation takes into account only the existence of the first of these two classes, that of thoughts; the economic school studies only the second, that of acts. But both are necessary for the explanation of any historical situation whatever. Thus the positive method demonstrates that there is no true opposition in theory between the two schools, and at the same time, supplies a proper category for the data resulting from their respective investigations.

It was Comte who rendered this invaluable service to the sound study of the past when he established the dynamical laws of sociology, one for the theoretical evolution of theory, the other for the evolution of practice. The law of the evolution of thoughts has been formulated in the preceding chapter; it now remains to set forth the law of the collective cumulation of acts. This chapter, then, will be devoted to this second law. First, it will summarize the most detailed exposition that Comte made of this law; then it will follow the steps that led Comte to the final formulation of his law; lastly, after the two sections just indicated, it will undertake to adapt this formulation to the needs of the new definition of sociology already set forth at length.

The law of practical evolution is set forth by Comte in the first chapter of the *Social Dynamics*. The first part of this chapter is devoted to the establishment of the general law of the historical filiation of human conceptions, in which is demonstrated the relativity of all opinions whatever. In this part of the chapter, it is first a question of the law of the three states and then of the law of dogmatical classification, termed, in the preceding chapter of the present volume, the law of successive positivity. This demonstration accomplished, Comte takes up the problem of establishing the law of the active evolution.

He speaks as follows: "The second sociological law [the law of classification] being sufficiently demonstrated, the double theory of the mental movement is fully established. I must now connect it with the true sum of social development in the light of the general rule that determines the course of activity.

"As regards this third and last fundamental law of dynamical sociology, the principal difficulty is to circumscribe its special domain adequately. Such a preliminary once accomplished, the demonstration of the law will demand no special effort, so spontaneously does it spring either from a true knowledge of human nature or from a sound appreciation of the social past."[1] That is to say, this law can be established either deductively or inductively.

Here, once more, should be remarked the influence upon Comte's thought of his essentially biological conception of the source of the knowledge of human nature. Once more the fact should be emphasized that a dynamical law of sociology can be established deductively from a knowledge of human nature only if this knowledge is furnished by a science below sociology or by sociological statics. Comte, in fact, believed, at this period of his intellectual evolution, that the theory of human nature was sketched in biology and perfected in social statics, the domain of which was "our immutable nature." Consequently he could speak logically, in the passage quoted, of the deductive establishment of a dynamical law of sociology. But it must be asked how it is possible to establish such a law deductively if the problem of determining the elements of human nature is transferred to morals, the abstract science above sociology? The answer must be that such a possibility does not exist once the transfer is made. The laws of an abstract science can be determined only by way of induction. The law governing activity is no exception to this general rule of scientific method.

But Comte, at the moment of writing the lines just quoted, had not yet understood all the logical consequences of his institution of the science of morals; consequently his presentation of the law is wholly deductive. His exposition of the law continues as follows: "It is necessary first to distinguish two kinds of activity, one theoretical which aids the intellect, the other practical which dominates it. Both present the same biological character, muscular exercise under the impulsion of the active region of the brain stimulated by some instinct. But they differ sociologically, by virtue of the destination and the results of the movements performed. In effect, the first is limited to manifesting the interior state of the animate being; while in the second, it modifies the exterior world. Besides being of superior intensity, the latter, by virtue of its influence on the exterior world, deserves alone to keep the characteristic name, following universal usage . . .

"But, although theoretical activity is as real and not less important than practical activity, it must be completely set aside here, since it requires no new sociological law. Subordinated to the intellect, it follows necessarily the course of the latter. All the notions proper to it belong essentially to the theory of language."[2]

"Here then I must concentrate attention upon activity proper, which continually modifies the exterior world in conformity with the fundamental needs of our interior constitution, corporal or cerebral. This permanent elaboration gives birth, in sociology, to new influences, which are complicated therein with those of the intellect, and tend always to dominate them. But its dynamical appreciation demands first a second distinction, the necessary complement of the distinction preceding.

---

[1] POL. POS., III, p. 53; Eng. tr., III, p. 44.

[2] POL. POS., III, pp. 54-55; Eng. tr., III, pp. 44-45.

"It consists in the habitual separation of the appreciation of means from that of ends. For the first still depend upon the intellect, and in consequence the third sociological law finds no application there. Whatever be the direction of our activity, we put into practice in following this direction only the procedures essentially due to the mind, of which they even compose the principal domain, since speculation is above all destined to perfect them. Their dynamical appreciation belongs then to the double law of mental evolution, envisaged in all its natural extent. Thus the third sociological law is finally reduced to regulating the general succession of the variations proper to our practical destination . . .[1]

"Instituted in this way, this investigation can offer no capital difficulty. For the whole mass of our material requirements allows directly of but a single source of satisfaction, work properly so-called, i. e. our useful action upon the human environment." But "its final ascendancy must be preceded by the provisional preponderance of another kind of activity, destined to last, though always decreasing, as long as the initiation of man, of which it becomes a necessary element. Here then is the moment to explain directly this essential distinction, which constitutes the proper domain of the third sociological law.

"Labor becomes finally the sole source of material satisfaction only with regard to the whole of the human population. But, for each partial association, another solution presents itself at first, as more prompt and more spontaneous, namely, the obtaining over certain men a somewhat durable empire, analogous to that exercised by our species over its animal auxiliaries. Direct labor is indispensable only for production and not for transmission, on which alone depends the final efficacity of accumulations. So forced exchange, i. e. conquest, can dispense with voluntary exchange for the nourishment of those who, disdaining pacific activity, can not habitually obtain true gifts. Although this method of alimentation can not be applied by all, each finds himself disposed towards it by the hope of better fulfilling its conditions. Such then, at the beginning, is our principal activity, especially collective, with which nevertheless labor is always associated in view of the natural uncertainty of military results.

"Two very pronounced inclinations push us spontaneously in this direction: the repugnance long inspired by all daily elaborations, and the direct impulsion of the instinct of destruction. The latter, always more energetic than the instinct of construction, is besides developed continually by the exercise inherent in our carnivorous alimentation. The cerebral constitution and the corporal economy concur then to make warlike activity dominate practical activity at the beginning of all human association."[1]

---

[1] "If we considered only the individual activity of man as animal, there would be no occasion for the establishment of a law. . . . There is variation in the means employed, but there is none as regards the ends, which are always the same. On the contrary, when man acts collectively, there is not only coördination of the movements of each individual, but there is also coördination between the movements of different individuals. This coördination of the movements of individuals is made for the purpose of attaining an end assigned to the collective activity. Therefore we may conceive of society as organized for the attainment of ends that are not always the same. . . . The purpose of our law is to see if there is not a regular succession of principal ends successively proposed by societies in their gradual evolution." Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, p. 364.

Comte next demonstrates that such a regime was as indispensable as it was inevitable, and continues as follows: "Such are the various moral and political properties in virtue of which military sociability necessarily presides over the original growth of our species. Thus the third sociological law is demonstrated as regards the only term that presented any great difficulty. . . .

"The decisive preponderance of industrial life in the modern Occident has already become incontestable for all judicious observers. I need only remark here that the whole of my demonstration of the initial ascendancy of warlike activity represents this necessity as evidently provisional. Although the vain struggles of primitive clans seem endless, it cannot be so for the system of conquests that constitute the grand social destination of war. It necessarily ceases as soon as it has reached all the extension that it allows of. Then directly arises industrial existence, indirectly prepared by the military regime. . . .

"But, however natural may be the succession of the two extreme states, their opposition requires an intermediate state, proper to direct this necessary transition." [2]

"In fact, the total development of the system of conquest proper to antiquity would have been able to determine the direct rise of industrial civilization only if it had embraced the whole of our species. Such a plentitude being impossible, military activity continued to dominate in the tribes that escaped the gradual incorporation. But from that time on it was directed against the dominant population especially, which was thus led, at first spontaneously and then systematically, to change attack into defense. In this way feudal civilization had to succeed conquering sociability in such a way as better to prepare the industrial regime."[3]

Hence, according to Comte, the law of active evolution can be stated as follows: Activity passes through three consecutive modes: conquest, defence, labor—whence the three states of activity in historical evolution: the military, the feudal, the industrial.[4] The law remained essentially unchanged in its last formulation, occurring in the third chapter of the fourth volume of the *Positive Politics*, where it appears as one of the fifteen universal laws of the positive dogma. There it is stated thus: Activity is first conquering, then defensive, finally industrial.

Now, two criticisms may be addressed to this law, whatever the form

---

[1] Pol. Pos., III, pp. 55-57; Eng. tr., III, pp. 45-47.
[2] Pol. Pos., III, p. 61; Eng. tr., III, pp. 50-51.
[3] Pol. Pos., III, pp. 62-63; Eng. tr., III, pp. 51-52.
[4] Pol. Pos., III, p. 63; Eng. tr., III, p. 52.

Comte gave it. The first of these objections has only a minor importance. It goes to the form of the law rather than to its contents. The law, presented in the way just quoted, seems, it can be said, to neglect entirely the primordial state of activity, the active state parallel to the state of fetishism in the intellectual evolution. The objection is well taken; but it is easy to turn its force by decomposing the first of the three terms of which the law is composed. The second objection is more serious. Comte, it has often been said, was mistaken when he affirmed the disappearance of war, and consequently his law is not a true law but only a too generous and too confident generalization. The objection is not without force, especially in the light of contemporary events; but it rests, in the last analysis, upon a failure to grasp the true import of Comte's thought. It will not be difficult to correct the law so as to put it beyond the reach of this criticism, as will be seen. The two defects indicated by these two objections are the result of the strictly practical aim that Comte's sociological investigations always had. The nature of his ultimate purposes will be best shown by an examination of the way in which the law of activity took shape in his mind. Here, then, is the place for a brief presentation of the intellectual development that led Comte to the final formulation of this law of activity.

Comte's point of departure, in his study of the active evolution, was in fact the final state of this evolution, i. e. the state of industry. When he began his philosophical work, the conception of an industrial regime to arise in the immediate future was common to many philosophers; and Comte accepted this generous aspiration of the thinkers of his time. He had found the idea expressed in varying fashion in Adam Smith, in Hume, Condorcet, Fourier, Saint-Simon, Dunoyer, and especially in Hume and Dunoyer.[1] For Comte, absorbed by the problem of the reorganization of political life, the great problem to solve was this: How give to society the direction necessary to guide it from the feudal period now dying to the industrial regime of the future? To furnish this direction it was necessary to find the law governing the evolution of those societal phenomena here called acts.

This notion of a future regime of peace and industry was not, however, a scientific conception. The industrial state of the future was, with the thinkers contemporary with Comte, but an aspiration, a far-off event, desirable but not inevitable. They established a contrast between this hypothetical future and the long period in which war had been the directive force, the final end, of social activity; and this contrast led them to the condemnation and the disparagement of almost the entire past of mankind. A true law of societal development would have demonstrated the enchainment, the inevitable connection, of the past with the future. This demonstration was furnished by Comte.

He found the key to the problem in his studies of the Middle Age. The nature of war, among the most highly developed representatives of Humanity, i. e. the Occidental nations, changed during this historical period. "The whole of my sociological meditations having been soon directed towards the appreciation of the Middle Age, as the essential point in a true philosophy of history, I did not delay in filling this deep gap [between modern mores and those of antiquity] by determining this intermediate state. Guided by my law of mental evolution, I recognized that defensive activity had then to fill, in the practical order, an essentially transitory office analogous to the theoretical destination of the metaphysical spirit." [1] That is to say, war, once aggressive and waged for conquest, was in fact transformed during the Middle Age into a means of protection and defense. This conception of the *logical* importance of the Middle Age made possible at once the enunciation of a law of human activity.[2]

---

[1] Pol. Pos., III, p. 62; Eng. tr., III, p. 51.

The first formulation of the law is found in the *Plan for the Scientific Labors Necessary to Reorganize Society.* Comte there presents it as follows: The whole of human history, he says, can be divided into three great epochs or states, distinguished as regards their temporal character into military, legist, and industrial. The second of these epochs is intermediate and mongrel; it operates a transition. "Industry is at first favored and protected as a means of making war. Later, its importance augments, and war ends by being conceived of in its turn as a means of favoring industry, which is the last state of this intermediate regime."[3] In the fourth volume of the *Positive Philosophy,* Comte again undertook the problem of defining this law, and there he explains more in detail the nature of this second intermediate degree: "The necessarily equivocal and unsettled character of such a social phase, in which the various classes of legists were destined above all to occupy, in appearance, the political scene, had at first to consist essentially . . . in the habitual substitution of defensive military organization for the original offensive organization, and then even in the involuntary general subordination, more and more pronounced, of the warrior spirit to the productive instinct."[4] And this conception of the law of activity remained without further development down to the first chapter of the *Social Dynamics,* where Comte revised it for the last time in the pages that have already been summarized in this chapter.

It is easy to see in all this intellectual progress the constant preoccupation of Comte with the application of his theories to political life. He was seeking a sure means for guiding social evolution systematically from the present to the future; and he found it in this law, which not only determined precisely the political nature of this future but also explained the course of the past and the present and thus illuminated the entire course of mankind. In this development, the most important stage, from the point of view of logic and history, was the first,

---

[1] Pol. Pos., III, p. 62; Eng. tr., III, p. 51.

[2] At the same time, too, it freed history from all tendency to approve or to disparage any historical epoch whatever. The study of history thus becomes objective and positive. It is no longer a mere mass of examples: it reveals "a series of preparations, the principal efficacity of which is derived from the enchainment between them." Pol. Pos., IV, p. 4; Eng. tr., IV, p. 4.

[3] Pol. Pos., IV, app. pp. 112-113; Eng. tr., IV, p. 573.

[4] Phil. Pos., IV, p. 577.

i. e. the state of activity parallel to the fetishist state in the evolution of intelligence. But this stage, despite its theoretical importance, was of no special significance from the point of view of practical assistance in directing the transition from the present to the future. Comte, therefore, paid it no marked attention, in conformity with his invariable principle of subordinating means to ends.

The first of the two objections to the law of the evolution of activity thus answered, it remains to consider the second: the alleged error on Comte's part as to the disappearance of war. Has war in fact disappeared? The objection grows out of a complete failure to grasp the import of Comte's theories. What he was seeking to determine in his studies of sociological activity was the law governing the succession of ultimate purposes for which societies have been from time to time organized. He saw, by virtue of these studies, societies organized for conquest; he saw societies organized for defense; he saw societies organized for industry. He demonstrated the necessity, in a distant future, of an activity purely pacific. In the light of these inductions, he affirmed the disappearance of war, not of war as a deplorable incident in the relations of different nations, but of war as the ulterior and dominant aim of the active life of society. There is a phrase that throws a vivid light on all of Comte's discussions on the question of war. It occurs while he is speaking of the historical institution of paid armies: "Employed first as a means of order, it even then announced its final transformation into an instrument of police, *when the Occident shall have exhausted all the exceptional causes of modern wars.*"[1] That is to say, war as the business of society, as the principle of coördination of the active life of society, as the main societal end, has disappeared; there remain only the wars arising from exceptional causes.

One concession only need be made to the critics of the law of activity: Comte seems, in affirming the disappearance of war, to have passed too abruptly from the state of defence to the state of industry. Is there no intermediate state in which the developing industry is but spontaneous, and not systematically organized as the conscious purpose of societal activity? No doubt the law can be thus improved to great advantage; but this improvement is quite secondary; it will be effected easily in the next section of this chapter in which an effort is to be made to adapt the law of activity to the abstract definition already given of sociology.

Once more, and for the last time, in beginning this modification of the law of activity, the abstract nature of the societal phenomena in question should be emphasized. There is no reference here to individuals nor to societies; what is in point is nothing but acts—coördinated muscular contractions affecting things[2]—acts in themselves so insignificant that in the vast majority of instances they are wholly forgotten. It is these phenomena, valueless in isolation, which, by being combined collectively, create an environment in which all analogous subsequent phenomena must be accomplished. The individual agent will ordinarily be unconscious of the import of his own activity; he may be urged to action by the most varied motives; he may be striving to resist the influences that he believes to be the directive forces of the society of his time; rarely will he be coöperating designedly in the realization of the ulterior societal aims. These facts have no importance; the intentions of man do not enter into the domain of sociology; this science deals exclusively with results.

---

[1] Pol. Pos., III, p. 538; Eng. tr., III, p. 456.

[2] Laffitte, Cours de Philosophie première, I, p. 369.

A single concrete example may be allowed. An individual may consecrate his whole life to the propaganda of, say, anarchy of the most extreme type; but in the proportion to which he lives and works, the acts resulting from this activity will help to maintain the social structure that he seeks to destroy. The purchase of food, the renting of lodgings, the printing of his propaganda—all these entirely impersonal acts combine with all the analogous acts of others to maintain and conserve the mores and the institutions proper to the state of societal evolution attained by the society of which he is an involuntary member. His very death, in so far as it implies his burial, does but cause the starting of a new series of acts that derive from the same societal situation and in turn aid to maintain it.

In short, every act of every individual living in group existence, is instantly combined with all the acts of all other individuals to determine the milieu in which the next act shall be performed. This new societal phenomenon may be effected by the same individual or by another; the detail is unimportant; all subsequent activity is conditioned by the totality of the results flowing from the collective actions that preceded it. This uninterrupted series of acts forms a mass of collective cumulations that imposes upon the activities of all men a coöperation, conscious or unconscious, in a certain societal end. This movement of societal activity is, from the abstract point of view, as inescapable as the force of gravity. Its pressure is exerted everywhere and always as unconsciously and as inevitably as the pressure of the atmosphere. All that can be done to modify it is to discover the law that controls its evolution and in consequence determines its direction. The conscious efforts of man can not change the direction of the movement; they can but retard it or accelerate it; and even these results are possible only within rather narrow limits. In other words, the acts of men are as relative to their societal state as are their opinions.

It is, then, this succession of societal aims coördinating the collective cumulations of acts that is the domain of the law of the evolution of activity. In order to determine the law of this succession of aims, the first necessity is to establish the nature of the initial stage of the active evolution, to define and to determine the purpose that united, at the same time that it coördinated, the first collective acts.

The nature of this primordial method of societal coördination is not difficult to determine. Induction, based upon the observation of the most primitive animal groups, indicates clearly that the first aim of collective activity was entirely destructive in character, especially in that stage of sociality traversed by the animal *Homo* in common with the other higher animals, i. e. the entirely spontaneous stage of the evolution of activity. This inductive indication as to the initial purpose of collective acts is confirmed deductively by the consideration of the biological nature of the organism. The latter furnished a spontaneous point of departure for the societal process. The first and sole necessity of a primitive group is the satisfaction of the material needs of its members; members whose first acts are the seizure and immediate consumption of everything that seems fit to satisfy their needs. All primitive societal acts are coördinated on this organic basis. In consequence, destruction—not for the love of destruction in itself, but for the maintenance of life—is the immediate as well as the ultimate goal of the collectivity. Each individual remains a part of the group only on the condition of coöperating, directly or indirectly, in destructive activity.

This state of the active evolution begins very low in the animal scale, and becomes systematic only in a small number of the higher sociable species. It might therefore be called the stage of destruction; but this term would not adequately distinguish the period in which the animal *Homo* became Man. This second division of the first stage is still marked by destruction. But the efforts of men tend toward destruction, not only to obtain nourishment, but also for the extermination of harmful animals and vegetals. Consequently this stage of the cumulation of collective acts will here be called the state of extermination. The fact that it was in this period that is found the great societal institution termed domestication is no objection to the position just taken. On the contrary, the fact makes more evident the necessity of enlarging the conception of societal phenomena far beyond the limits usually set to it. Sociological phenomena are never exclusively human. The lower animals were often an integral part of the primitive group. The dog, for example, was in no sense a savage competitor, subjugated by craft and strength, nor a mere pet, but a true ally, a *socius*.

Comte included this stage of the active evolution under the term 'military' in his last formulation of the law of activity; but it has been worth the trouble to point out more specifically its precise nature, especially in view of Comte's own remark that the obstinate struggles of this far-distant period were but sterile conflicts and far indeed from instituting genuine war.[1]

The first state of activity is then that which coördinated collective acts by giving them extermination as their final purpose. The final state, as Comte determined it, is the state of industry. The practical evolution is thus decomposed into extermination and industry. Between these two extremes is intercalated the state of war. Thus arises the progression: extermination, war, industry. When the middle term is decomposed according to Comte into two states, the following series results: extermination, conquest, defense, industry. The separation in logic between the last two terms of this succession seems to be too great, as has already been remarked; it will be reduced by decomposing the last term into spontaneous industry and systematic industry.

It is Comte's conceptions that are the source of this decomposition. After his appreciation of warlike activity, in the first chapter of the

---

[1] **Pol. Pos.**, III, p. 107; Eng. tr., III, p. 89.

Social Dynamics, he expresses himself as follows: "All these normal properties of military existence long form a profound contrast with the tendencies inherent in industrial life. The exercise of the latter begins by being essentially personal or at least purely domestic. This egoistic character persists in it even when industry has taken a great development, as we see too well today. Hence results the principal obstacle to the normal systematization of pacific life, while the moral aptitude of military existence renders it easily susceptible of a full organization. This is why, up to the present time, the natural superiority of the only activity that allows of universal and continuous growth has been neutralized. However great the public utility of industrial services, so long as it is not suitably felt by each private coöperator, its principal moral reaction cannot be developed. Despite the superior nobleness of the instinct of construction, the instinct of destruction remains more worthy as well as more energetic, if the latter is exercised habitually in the light of a social destination and the former for personal satisfaction. The intimate morality proper to voluntary exchange tends even to be effaced entirely when the contrast between labor and conquest seems reduced to replacing violence by fraud." [1]

There is in this passage an implicit distinction between industry properly so-called, i. e. the conscious and systematic organization of society entire for creative labor, and the state in which industry is spontaneously in the way of being organized. This empirical and spontaneous period of industry has sometimes been called 'industrialism'; but here, in the light of the sociological appreciation of this period made by Comte, the term *enterprise* [2] will be used. The series of four terms thus becomes a succession of five: extermination, conquest, defense, enterprise, industry—a succession in which the principal stages of human activity are adequately represented.

This law of the collective cumulation of acts, formulated as a succession of five states, is however a law of similitude. It affirms, in effect, that every society, evolving spontaneously, passes by the same succession of stages; that the evolution of acts is everywhere and always the same. Consequently, it gives us a series of points determining a curve that will represent the practical movement in the abstract. This curve once traced, it will be possible next to turn the attention from the successive states to the nature of the process the various distinctive resultants of which are marked by the points determining the curve. Ultimately, it will be possible, by studying the process in itself, to construct a law of succession.

---

[1] Pol. Pos., III, pp. 58-59; Eng. tr., III, p. 48.

[2] Pol. Pos., III, p. 491; Eng. tr., III, p. 413. "This social elaboration of industry had above all to consist in a decisive separation between the workers and the entrepreneurs. On this separation necessarily depended the fundamental transformation of the character of industry, which, at first purely individual, could finally become truly collective only by virtue of the normal preponderance of the directives over the operatives."

It is of course the survivals of the military stage, in combination with the unregulated ambitions of individual entrepreneurs and adventurers (as they were once called), which explain the use of the term 'imperialism' with reference to the stage in point in the text above.

For the construction of this law there will be needed two variables, one independent, the other dependent—as in the case of the law of the intellectual evolution. The independent variable is here as before the mass of collective cumulations. The mass of collective acts augments always. Note, once more, that it is not only the number of cumulations that increases, but their force. The combined results of collective acts already accomplished more and more determine the nature of the results still to be effected. From this point of view, the individual who coöperates in collective activity is forced to combine his efforts with those of others for the attainment of the purposes of the group. If he refuses all coöperation, even with the past and the future, he is no longer a social being. The mass of collective cumulations, then, determines, from the abstract point of view, the direction of any societal act whatever.

The dependent variable is equally certain. Collective acts are coördinated in the first societal state by the need of destruction; in the final state by the necessity of construction. There is then a continuous augmentation of the creative or constructive element in the activity of groups. In other words, the societal process, in so far as it concerns practical ends, tends always to evolve from destruction to labor. Exactly as the geometrical limit of the collective exercise of the intellect is the perfect representation of the objective world, so the geometrical limit of collective activity is the state in which each act is performed with a constructive aim in view. By the combination of these two variables, the law of the continuous cumulation of collective acts is obtained: *The constructivity of the collective cumulations of acts varies with their mass.*

Such is the Law of Growing Productivity, the law governing the evolution of collective acts, the second of the two classes of societal phenomena, parallel to the Law of Increasing Objectivity, applicable to thoughts.

A combination of the results that follow from the operation of the two independent though related laws formulated in the preceding chapters will result in an abstract representation of the course of human development. Such a combination is the last step possible, from the dynamic point of view, to a purely abstract sociology. It is as well an indispensable step, for what it gives is a *first approximation* to the explanation of human history.

This chapter is in no sense, then, an attempt at what used to be termed a 'philosophy' of history; but neither does it indicate nor imply a rejection of the essential idea underlying that phrase. On the contrary, if, for the old term 'philosophy,' be substituted the words 'positive explanation,' then it is distinctly maintained here that one important use to which a science of sociology may ultimately be put is to provide an explanation of the course of human history in the sense that particular events can be related to uniformities observable throughout the entire record.

A first approximation, then, of a positive explanation of history results from the combined operation of the dynamic laws of sociology herein set forth. Since these laws are essentially independent, but are nevertheless influenced one by the other, their combined working results in a series of unstable societal equilibriums, to which the word 'stages' or 'states' may be applied, and in the light of which history at once begins to reveal a 'meaning.' Investigation in the future will increase the number of these 'states' and so approximate more closely to the historical record; to the working of the societal process will be added the conditioning influences of environmental, biological, and individual forces until the concrete historical phenomena are directly approached; but the foundation of any such accomplishment in the future is a series of states such as is here presented.

The societal process once presented in its most abstract form, an attempt is in order to represent the development graphically, whence the curve that is the point of arrival of this volume. Whatever the defects of this construction, it does at least reveal the relativity of all human thought and action, from the phenomena of population on the one hand to the highest reaches of philosophy on the other. At some point on the curve every thought and act of man must be placed, if it is to be understood properly.

The discussion of the practical value of the curve is postponed until the next chapter, but occasion is seized in bringing the chapter to an end to present Comte's audacious conception that the deliberate and conscious elevation of backward societies to a higher plane in societal development is made possible by the utilization of the science of sociology.

CHAPTER X.

The Abstract Development of Sociality

THE best introduction to this chapter, in which abstraction in sociological theory is carried to the farthest point yet reached, will be a summary of the progress already achieved in this volume.

The first part of this study began by the establishment of a clear-cut distinction between abstract sciences and concrete sciences. In the light of this fundamental conception, the evolution of Science was followed through the successive constitution of the sciences composing Logic and Physics down to the moment when the analysis of Psychics was imposing itself upon the scientific mind. The first step in this last stage was the institution by Bichat of biology as the abstract science of the life of organisms—a beginning which, by revealing the existence of phenomena above the vital phenomenon immediately suggested to the genius of Auguste Comte the institution of a social physics, the abstract science of the life of super-organisms, i. e. of societies. Finally, the intellectual development of Comte was outlined, leading him to the discovery, after thirty-five years of labor, that the social fact is not a specific and irreducible phenomenon, like the societal fact, but a composite phenomenon, divisible into the collective or societal fact and the individual or moral fact, whence his final constitution of a scientific hierarchy of seven members, culminating, above sociology proper, in morals, *la morale*.

The second part of this volume strove, in the light of all prior progress, to institute the abstract science of the specific attribute of sociality. It was necessary first to define sociology. This definition was based upon Comte's analysis of the life of Humanity, complemented by Sumner's theory of the societal process. The results obtained by these two thinkers, when subordinated to the principles of the positive philosophy, gave a definition of sociology as the science of collective cumulations. The second task of this part of the volume was to divide sociology, in the light of this definition, into its two great divisions, statics and dynamics; to set forth the main lines of statics; and to prepare the discussion of dynamics by the classification of societal phenomena into thoughts and acts.

The third part of the volume has sought to aid in the constitution of sociology by establishing, after Comte, the fundamental laws of sociological dynamics. These laws are two in number: the double law of the collective cumulation of thoughts, which has been termed the law of increasing objectivity; and the law of the collective cumulations of acts, which has been called the law of growing productivity.

At this point of progress, there would be good reason for stopping. The most important advances, from the point of view of theory, have been made. Yet it will be well to go as much further as possible. Without leaving the domain of the abstract, the establishment of politics upon systematic and positive foundations can be still further facilitated. No scientific effort is more imperiously demanded by the present necessities of mankind, necessities that are even greater today than they were when they urged Comte to undertake his labors. The present generation has seen the complete break-down of the political system of a great nation, involving a revolution that could certainly have been avoided.[1] There will be others, if the political life of the world continues to be directed by means of empirical procedures.

These deplorable results, making inevitable the most disastrous consequences for society, have henceforward no reason for occurring. The sociological discoveries of Auguste Comte have made it possible for mankind to direct its life consciously. Sociological statics, giving a scientific knowledge of the conditions indispensable to the operation of the process by which societies live, permits of the continuous development of societal order and in consequence assures a certain progress; sociological dynamics, showing the direction of this progress, indicates the nature of the changes to be made in the political structure in order to facilitate societal evolution. A given collectivity can thus elevate itself systematically and peaceably from one societal state to another.

But, in order to attain completely the goal just set, it will be necessary to ask a final service of the science of sociality. It must be brought nearer to the reality than it has been brought hitherto in this volume. The dynamical laws that have been established are so abstract that they can be applied only with difficulty to a given concrete case. Each sociological situation presents itself under an extremely complex aspect, the results of the collective cumulations of thoughts being always mingled with the results of the collective cumulation of acts. It remains, then, to study the laws of these two classes in their combined operation. The effecting of such a combination will be of great value, for it will make possible a precise knowledge of the societal evolution as a whole. This, too, is the last advance possible to an entirely abstract sociology.

The source of this conception of a combination between the two societal evolutions is, once again, the work of Comte, and in particular the following passage: "It now remains for me to characterize the necessary concordance between the general rule for the temporal evolution and the double law that regulates the spiritual evolution. Their final combination, alone fully decisive for their common destination, will make more sensible the profound impotence of all partial estimates as regards the third law of sociology [the law of affective evolution].

---

[1] Among the nations to whom Comte offered his political counsels was Russia. See, in the preface to the SOCIAL DYNAMICS, the letter to Czar Nicholas. Note especially in this letter the remarkable prediction of the political decomposition of Russia. POL. POS., III, pp. 38-45; Eng. tr., III, pp. 33-39.

But it will above all demonstrate that such a system is as sufficient as it is necessary for constructing directly the philosophy of history under the dogmatical inspiration of social statics."[1] That is to say that societal laws alone do not suffice to explain history; it is necessary to complement them with the law of affective evolution.

Now the law of affective evolution is, for the Comte of the *Social Dynamics*, an emanation from the *Social Statics*, the essential subject of which was human nature, a subject that was transferred, as has been seen, in its totality to the science of morals by Comte, in the third chapter of the fourth volume of the *Positive Politics*. In this divergence of views is the key to the difficulties in logic and the complications in theory of the first chapter of the *Social Dynamics*. Once this inversion of the materials proper to different sciences has been corrected, once the data of morals have been separated from those of sociology, the entire thought of Comte is illuminated and all repetition avoided.

The task to be performed here, then, is clear. The present volume deals exclusively with the science of sociology "definitively constituted," and in consequence neither morals nor the philosophy of history is within its scope. In this chapter, then, will be studied only "the fundamental theory of human evolution preliminarily reduced to its essential elements."[2] This abstract representation of the societal movement is rendered possible by the full concordance between the two evolutions, intellectual and active. It will result from a combination operated between "the speculative evolution and the active evolution, whose continuous concurrence regulates the decisive up-growth of sociability."[3] The first task, then, is to render more precise the relations between the laws regulating these two societal movements.

The first fact of capital importance for the solving of the problem of the relations between the cumulation of thoughts and the cumulation of acts consists in this: the two evolutions have their ultimate source in the physical necessities of the organism. As Sumner said, the first task of man is to live. Or in Comte's terms, "it is necessary to regard the intellect and the activity as tending spontaneously toward the same general destination, the universal order, which the one strives to know in order that the other may succeed in modifying it."[4] The two evolutions, that is, are intimately connected by reason of the final identity of their aims: the maintenance of existence.

Nevertheless, they are, at bottom, essentially independent. No mass of cumulations of thoughts can make the state of war nor the state of industry precede the state of extermination in the evolution of activity. Similarly, no mass of cumulations of acts can make objectivity precede subjectivity, and more obviously still, as the entire history of Science shows, the greatest possible mass of cumulations of collective activity is impotent to alter in the slightest degree the operation of the law of successive positivity.

---

[1] Pol. Pos., III, p. 63; Eng. tr., III, p. 52.
[2] Pol. Pos., III, p. 67; Eng. tr., III, p. 55.
[3] Pol. Pos., III, p. 158; Eng. tr., III, p. 131.
[4] Pol. Pos., III, p. 13; Eng. tr., III, p. 11.

No better example to illustrate the logical validity of this statement of the relations between the two evolutions could be found than that of chemistry. It is constantly being said that the improvement of the industrial arts during the Middle Age involved an immense augmentation of chemical knowledge. Such is the fact; but it is not usually remarked at the same time that this information aided in the development, not of chemistry but of alchemy, i. e. chemistry in the theological and metaphysical state. Chemistry became a true science, an abstract science, only when the progress of Science as a whole had reached the stage in which physics proper could be considered as positive. The evolution of thoughts is thus entirely independent of the evolution of acts, despite the identity of their ultimate end.

But there is a relation of another kind between the two movements. Activity, for example, constantly brings new facts to light. Hence the mass of materials for speculation is constantly growing. Acts in this way are an aliment for thought. Again, since acts are performed for the satisfaction of the needs of existence, they serve to stimulate the intellect to the invention of new or better methods for the maintenance of life. Acts thus become a stimulus to thoughts. Finally, the reflections suggested by the results of activity are verified or corrected by ulterior acts. Practice thus affords direction to theory. Yet in all these cases, the most superficial observation reveals an action and a reaction between acts and thoughts. The statement is so obviously true that it needs no elaboration. The two evolutions are thus connected not only by the identity of their aims but also by the influence that one exerts upon the other.

And yet they are independent. The cumulation of one class of societal facts can be accelerated or retarded by the acceleration or the retardation of the cumulation of the other; but the natural sequence of essential states in each evolution is unalterable. The words of Laffitte summarize the thought: "The mental and the active evolutions have each its own source and its own course." "They are two elements, intimately connected with each other, constantly acting and reacting one upon the other; they form a genuine system, in the mathematical sense of the word."[1]

It is because the two movements form a true system that the sociologist can rise to the theoretical plane at which he can consider them as composing a single evolution, the societal evolution in the abstract. Their combination makes possible a closer approach to the reality because every sociological situation is a mixture of thoughts and acts. This combination can be effected on the supposition that the two forms of the societal process evolve with equal speed; that their actions and reactions also are equal. A characteristic state of one of these cumulations will therefore coincide with a characteristic state of the other.

---

[1] Laffitte, Cours de Philosophie première, I, p. 377.

"In mechanics the term system is applied to a sum of interrelated points, each subject to determinate forces, and which act and react one upon the other, according to the law that action equals reaction." Laffitte, Cours de Philosophie première, II, p. 104.

In fact, there is no justification for considering them in any other fashion when the abstract point of view from which they are regarded is kept in mind; the observable differences between two distinct societies are concrete; sociology does not deal with these special cases.

The final result of such a combination of the two collective evolutions will be a representation of the societal movement, a picture of sociological development, leaving aside the influence of all factors of variation foreign to sociology. It will make possible the construction of a curve that will reproduce graphically the movement of sociality, the irreducible attribute that is the basis of sociology. The construction of this curve, the point of arrival of this investigation, will be the next task for this chapter.

The first necessity for the construction of the curve representing graphically the abstract development of sociality is to determine the successive points through which it must pass. This requirement is easily met in the light of the results obtained in the two chapters preceding. The cumulation of the products of the collective exercise of the intellect gives rise, as has been seen, to a succession of characteristic states. The cumulations of collective activity give an analogous series. Now, since these two evolutions compose, as a whole, a system, their characteristic states will coincide and furnish the points determining the curve desired.

These two parallel movements are now to be combined. As regards activity, there is first extermination; then war, under its three successive forms, conquest, defense, enterprise; and finally industry. As regards intellect, there is first the fetishist state; then the theological state, under its three successive forms, polytheistic, monotheistic, scientific; finally, the positive state. The combination of the two series will give the points necessary for the construction of the societal curve: fetishist extermination; the three subdivisions of theological war, polytheistic conquest, monotheistic defense, scientific enterprise; and finally, positive industry.

There are certain objections to the conception that has just been given the precise form of an entirely abstract combination of the continuous and parallel movements of the two classes of societal phenomena; and since these objections emanate from the same source, namely, the failure to grasp the true import of the abstract conceptions arising from the study of societal evolution, they will here be discussed in turn, before the attention is turned to the construction of the societal curve.

The first of these objections presents itself in the words of Comte himself, and especially in the third chapter of the fourth volume of the *Positive Politics*. The five parallel states just combined in order to obtain the abstract movement of sociality differ from the indications of Comte in the passage where he sketches the plan for the future volume on sociology, the last three chapters of which were to have established "the dynamical theories of fetishism, of the theocracy, and of the triple transition."[1] It is certain, in the light of the *Social Dynamics*, that the words "the triple transition" include the Greek elaboration, the Roman incorporation, and the catholico-feudal initiation, or transition.[2] Should not the curve follow these indications? The following considerations would seem to indicate that it should not.

The three stages of sociological dynamics that Comte mentions, in the passage just referred to, were obtained by him by condensing the *Social Dynamics*. Now, on the first page of this volume will be found, as a subtitle, between parentheses, the words *Philosophy of History*. In other words, Comte, when he was writing the *Social Dynamics*, believed that the task of the dynamical section of sociology was to explain history. The fact clearly shows why Comte did not stop his sociology at the point indicated by the present chapter as the last advance possible to an abstract sociology. His words forbid any doubt as to his beliefs: "*But in order to construct the true philosophy of history*, it does not suffice to have first established the dynamical laws respectively proper to the intellect and the activity and then their full natural concordance. It is necessary also that their historical application should always remain subordinated to the statical theory of unity, which reduces the theoretical element and the practical element to being never anything but the necessary ministers of the moral element."[3] The truth of this affirmation can not be put in question. The true philosophy of history does demand a combination of the intellectual and active elements on the one hand, and the moral or affective element on the other. But the science that effects this combination ceases, by making it, to be an abstract science.

For the last time, then, the concrete and composite nature of the sociology of the *Positive Politics* should be emphasized; and for the last time the principle, stated by Comte himself, that has been the guide throughout this entire volume, should be repeated. The plan of the future volume on sociology "consists in the condensing of the double elaboration [the *Social Statics* and the *Social Dynamics*] proper to the treatise I am finishing, without requiring any really new conception, *after having separated*[4] *morals*, the rise of which, resulting from my work, could not have a sufficiently dominating position therein."[5] To separate from sociology as Comte left it the morals he instituted: such is the principle that has directed the present effort. The new definition of the societal fact made this effort possible for it threw light upon the conceptions of Comte expressed in the following passage: "After profane science has appropriately sketched the knowledge of the milieu, complemented by that of the body, sacred science begins the systematic study of the soul by appreciating collective existence, first statical and then dynamical. But this necessary examination constitutes only a last preparation, the incomplete character of which remains undeniable. We feel in it that the special study of the intellect being therein separated from that of feeling, it is possible to appreciate therein only *results*, the source and destination of which belong to the science that follows it. *If this false position of the mind is not manifest in the treatise I am finishing, that is due solely to the fact that the elaboration of morals is herein mingled spontaneously with the construction of sociology.*"[1]

---

[1] Pol. Pos., IV, p. 229; Eng. tr., IV, p. 202.

[2] Pol. Pos., III, pp. 7, 417, 622; Eng. tr., III, pp. 6, 336, 534.

[3] Pol. Pos., III, p. 67; Eng. tr., III, p. 55.

[4] *Séparé*, in the original; it has here been translated literally, not without a certain violence to the English idiom. 'Dissected out' would probably be an entirely exact rendering of Comte's thought.

[5] Pol. Pos., IV, p. 229; Eng. tr., IV, p. 202.

A final effort to define precisely once for all the complex relations between sociology and morals seems then to be called for at this point. Comte, at the beginning of his career, recognized the fundamental importance for the explanation of the social evolution of man of the conception that human nature is, at bottom, composed of an invariable number of stable elements. This conception, in fact, made possible his effort to explain all human history and to find in it positive laws. At first, Comte believed that the knowledge of human nature was purely biological in origin. But when he reached the end of the first volume of the *Positive Politics*, he found that biology could but give a sketch of this knowledge; and that the determination of the elements of human nature had to be sought from a science superior to biology. This science was, in his mind at this period of his intellectual evolution, the science of sociology, and in particular the statical division of sociology. *Social Statics*, in consequence, dealt with the entire question of the analysis of human nature. But continued investigation showed that sociology could not be devoted to human nature as a whole, but only to two of its three elements, intellect and activity—the study of the feelings being transferred to a science above sociology. At this point of his development, then, Comte defined sociology as the science of the intellect and the activity and morals as the science of feeling.[2].

Nevertheless, this allotment of materials could not be final; it destroyed the unity of the mind, and placed it in a false position, because the feelings are the true center of man's existence, to which the intellect and the activity are subordinated. To understand human nature, a knowledge of these three elements is indispensable. But if all three are transferred to the science of morals, what becomes of sociology? It seems no longer to have any domain; but such is not really the case, for Comte at this final stage of his mental evolution had discovered the true domain of this science, namely, *results*, whose source and destination[1] belong to the science above it in the hierarchy. Sociology thus becomes the science of the collective results of the exercise of the intellect and the activity; and morals the science of the intellect, the activity, and the feeling, considered as purely individual elements. Now the results of the collective operation of intellect and activity are collective cumulations, the material of the science of sociality; and, on the other hand, the elements of human nature are the source of the multiple differences that distinguish individuals, and they are, in consequence, the source of the attribute of individuality considered from the abstract point of view.

---

[1] POL. POS., IV, p. 232; Eng. tr., IV, p. 205. 'Profane' and 'sacred' science: Comte's attempt to put new wine into old bottles has given offense to some and confused others. All that he means by the terms is what is customarily indicated today by the terms 'natural' and 'social,' —the second of these groups, because of its more intimate relations with the individuality of man, taking the place of the 'sacred' sciences of the theological and metaphysical periods.

[2] A preliminary study of Comte's science, *la morale*, will be found in the present writer's THE SCIENCE OF INDIVIDUALITY, Bascou, Lyon, 1923. (Thesis; now out of print.)

In other words, as the result of this analysis, there is a science of individuality, morals; and a science of sociality, sociology. There are three elements of individuality: the feeling or affection, the intellect, and the activity.[2] The last two elements differ from the first in that their collective exercise produces cumulations. These cumulations evolve according to regular laws. *From the operation of these laws results a regular series of milieus that condition the manifestations of any given combination of individual elements. It is to the conditioning influence of sociality on the individuality that Comte alludes when he says that sociology "determines the fundamental direction of all our tendencies whatever."*[3] Now the precise aim of a philosophy of history is to explain the different directions followed by man's tendencies, i. e. to show why individual manifestations have taken this or that form in such and such circumstances. The two sciences of individuality and sociality must obviously be combined for any such historical explanation. Societal laws are the warp, individual laws the woof, of the tissue of history.

The philosophy of history being a composite product, the *Social Dynamics* is in consequence a concrete study. The indications found in the fourth volume of the *Positive Politics* are not sufficiently disengaged from the conceptions of the *Social Dynamics*, whence their concrete character.[4] The present study, more abstract, can not follow these indications literally. Sociology is here a completely abstract science, how then can it deal with Greek or Roman periods? Yet even though the words of Comte are not followed, their spirit has certainly been obeyed, for the understanding reader will discover in the explanations of this chapter the dynamical theories that will serve to account for the three stages of human evolution mentioned by Comte. Besides, in effecting the separation of individual materials from societal materials, it is confidently believed that the science of sociology has been raised to a state of complete rationality.

---

[1] Feeling is the "supreme motor of human existence," p. 48.

"The habitual service of feeling requires alternately the satisfaction of the impulses and the communication of the emotions; its two ministers, theoretical and practical, always concur in this double office, which constitutes their entire *destination*," p. 79.

Comte thus defines, in the Pol. Pos., volume three, the source and the destination of the collective cumulations that constitute the *results* with which sociology deals; Eng. tr., III, pp. 40, 65-66.

[2] "A psychical cycle . . . comprises intellectual manifestations or representations; affective manifestations or feelings (*retentissements*); and motor manifestations or exteriorizations." Achille-Delmas and Boll, La Personnalité humaine, p. 245. See, again, note 1, p. 62.

[3] Pol. Pos., IV, p. 3; Eng. tr., IV, p. 3.

[4] The distinction referred to in the text above seems also to be the explanation of the fact, otherwise so difficult to understand, that Comte divided each of the chapters of the Social Dynamics, after the first, into two main sections, one abstract, the other concrete.

A second objection to the abstract representation of the societal movement arises from the general study of history. This objection may take several forms that can all be reduced to the following: Does not the historical movement, even when envisaged generally, present a series of rather abrupt advances from one degree of civilization to another? The objection has a certain force: Vico and Hegel, for example, have given explanations of the phenomenon; and more recently Sumner strove to solve the problem by his theory of "a strain towards consistency."[1] In every historical development, he says, there is in operation a spontaneous tendency towards the construction of a coherent whole which shall harmonize all folkways, mores, institutions, and principles, of action as well as of thought. When such a logical and coherent whole is produced, a historical 'period' results; and history is but a succession of such periods.[2]

The conception of the societal movement as the resultant of the operation of the two elements of a system, reciprocally connected, throws light upon all analogous anterior theories and justifies them, and incorporates the elements of truth they contain into a single definitive theory. In the light of this conception, each element of the sociological system develops according to its own law, but in such a fashion that a certain progress of one of the two elements involves a corresponding progress of the other. From the abstract point of view, then, the two movements may be represented as evolving at equal speeds. But this method of envisaging the movement of sociality is not necessary, even theoretically. For the two evolutions, of thoughts and of acts, advance at unequal speeds. The movement of thoughts sometimes precedes the movement of acts; the contrary occurs under different circumstances. Thus the system advances by a series of brusque movements; from time to time an equilibrium is produced; and the movement can consequently be represented as a series of unstable equilibriums. When one of these successive equilibriums is produced, an historical period commences, characterized by that consistency of mores, institutions, and principles of which Sumner speaks.

Related in logic to the thought of the preceding paragraph is the well known anthropological objection to a rectilinear representation of social development.[3] To the series of stages here in question, the argument from anthropology does not apply. This is a work of sociology, not a work of anthropology, even of the cultural variety. Anthropology is concrete; sociology is abstract. *Sociology is to anthropology what 'pure' or 'general' biology is to zoölogy or botany.* Sumner and Keller put the position here assumed perfectly when they say: "It is useful to construct a series of stages of culture. No people ever went through it. It is made up of phenomena presented in many societies, set in order and sequence of development. This order contains an element of arrangement contributed from the mind of the series-maker, not from fact,"—i. e. it is an abstract series. "Classification by types is wholly necessary in this field; the science of society cannot but be schematic. "[1]

---

[1] FOLKWAYS, pp. 5-6.

[2] The spiral form sometimes assumed by the curve representing the movement of social progress is the result of the attempt to picture concrete developments succeeding one another in specific societies.

[3] The anthropological objection to a rectilinear representation of cultural evolution is exactly, *mutatis mutandis*, the objection that Comte raised to an analogous representation of biological evolution.

A final objection is more serious than the preceding because it denies the possibility of any graphic representation of the societal movement. How, for example, can be measured the difference between the principal methods by which thoughts have been coördinated; between the three ends that have successively coördinated acts? How compare, by means of lines, the state of fetishist extermination with the state of polytheistic conquest? The force of this objection must be admitted; it is well taken; but it does not destroy the possibility of representing graphically the movement of sociality; it goes to only one mathematical quality: precision. The societal curve, it must be granted, is, despite its mathematical appearance, only a kind of geometrical metaphor.[2]

But if this inevitable defect of the curve is frankly and willingly admitted, with all the greater insistence is it urged that the figure is not a purely arbitrary construction. Let an investigator take, for example, the case of the state of polytheistic conquest, and let him make an attempt to show by a line the nature and importance of this combination of methods of societal coördination. He will be of necessity compelled to give this line a certain length and a certain direction. Consequently, he will be forced to represent the state of fetishist extermination by a line having a different length and a different direction. The precise proportions between the two lines cannot be calculated at present, but the fact is none the less certain that one of them will have to be longer than the other. In other words, the graphical procedure here employed has the quality of certainty in the absence of the quality of precision.

This inevitable defect in the laws of the sciences in the higher ranks of the hierarchy was understood long ago by Comte; and he set it forth as follows in the pages of the *Positive Philosophy*: "Precision and certainty are two qualities in themselves very different. An entirely absurd proposition can be extremely precise; as if one were to say, for example, that the three angles of a triangle equal three right angles; and a very certain proposition may allow of only a mediocre degree of precision, as when, for example, it is affirmed that every man will die. If, in the light of the foregoing explanations, the various sciences must offer a very unequal precision, such is in no wise the case for their certainty. Each of them can offer results as certain as the results of any other provided it knows how to give its conclusions the degree of certainty permissible to the corresponding phenomena."[1]

---

[1] THE SCIENCE OF SOCIETY, pp. 2202-3. Yale University Press. 1928. And the following words, addressed originally to geologists, are well worthy of meditation on the part of the anthropologists. "Again and again must it be hammered into the minds of geologists that two distinct sets of names are required: the one consisting of local names for local rocks, the other of universal names, not for rocks, but for periods of time. Thus is constructed a time scale against which the various local rocks can be placed." F. A. Bather, ADDRESS ON WILLIAM SMITH, Bath, England, 1926, p. 6.

[2] "Every phenomenon, even social, would certainly have its equation, like a figure or a movement, if its law could be known to us with sufficient precision." POL. POS., I, p. 481; Eng. tr., I, p. 391.

A passage from Laffitte will appropriately conclude the discussion: "Laws have for the most part only a relative degree of truth; they are contingent, and as we can never hope to attain the absolute truth, it is then permissible to halt our researches at the degree of reality that seems to us best to answer practical needs." [2]

It was with this practical end in view that this volume has insisted from the beginning upon the example of Comte. The curve here given (p. 185) seems to reach the degree of precision necessary to guide political effort. Others may seek a more exact measure of the results of the operation of the societal process.[3] It is possible to modify the length or the direction of one element of the curve or another; it is possible that the length of the intermediate element O-V, between the principal elements B-O and VI, should be greatly reduced; it is even possible that the direction of the lines should be changed entirely. A fetishist, for example, might place the element of the curve representing the primitive state at the top of the diagram and represent all movement thereafter as a degeneration from a state of primitive innocence. A polytheist would doubtless make polytheistic conquest the culminating point of the curve—all movement anterior being a rise and all movement posterior a decline. But neither the fetishist nor the polytheist would be free from the necessity of giving a length and a direction to the other members of the curve. Neither the one nor the other could change the proportions, except deliberately, sufficiently to destroy the value of the curve as a guide for action.

Attention, then, must finally be turned to the last problem of this volume: the task of sketching the actions and the reactions of the two societal evolutions, of making more precise the necessary concordance between the cumulations of thoughts and the cumulations of acts. Nothing more will be sought in this first effort, for which there is almost no guidance,[4] than to trace the main lines; the demonstration of the more intimate relations between the two elements of the societal system belongs to the future.

---

[1] PHIL. POS., I, p. 85.

[2] COURS DE PHILOSOPHIE PREMIÈRE, I, p. 193.

[3] It is particularly in the enlargement and development of the section of the curve marked TV that the abstract sociologist can be of immediate service to the statesman.

[4] Pages 63-67 of the SOCIAL DYNAMICS; Eng. tr., pp. 52-55. Laffitte, COURS DE PHILOSOPHIE PREMIÈRE, I, pp. 377-383, adds nothing to the ideas of Comte.

The first of the sociological states is that called here fetishist extermination.[1] This fundamental state which everywhere was long dominant, "even before the continuous action of material milieus had produced the diversity of races,"[2] is a combination of the two primitive methods of societal coördination. The intellectual principle consists in attributing "all material phenomena to the direct affections of the corresponding beings," [3] in spontaneously attributing "subjective vitality to all beings whatever." [4] The active principle consists in the seizure and immediate consumption of whatever seems apt to satisfy needs.

The first methods of coördinating acts and thoughts arose directly from the biological nature of the organism; and the relations between them cannot be doubtful. Man, at the beginning of his societal evolution, i. e. the animal *Homo*, sees in every being around him a possible source of nourishment, and since he envisages them as beings similar to himself, he sees in them a real source of peril. He seems alone in a hostile world; he is almost driven to isolation. At the same time, the cumulation of facts reveals to him marked differences in the power and the benevolence of the beings that environ him. If consideration be given, for a moment, to the influence of this combination of societal states upon the individuality, it will easily be understood that the feelings of man urged him to attach himself to the beings of his milieu that seemed the best disposed towards him, or to placate those that he most feared. Hence the two concrete characteristics of this stage of social evolution: individual fetishes and tiny clans.[5]

---

[1] The names here applied to the successive 'states' of societal evolution are obviously open to criticism. The choices finally made would not be too stubbornly defended. What is more important is that whatever the terms ultimately selected, they shall conform to the spirit of the following passages: "To the naturalists" said Comte, in criticising Condorcet's names for historical epochs, "are due the chief advances in the general method of classifying." "The true principle consists in making the order of generality of the different degrees of division conform as far as possible to that of the relations observed between the phenomena to be classed. In this view, the hierarchy of families, of genera, etc., is nothing but the statement of a coördinated series of general facts, divided into different ranks, more and more specialized. In a word, the classification then becomes merely a philosophic expression of the science, the progress of which it follows. To know the classification is to know the science, at least in its more important portions."

"The different epochs of civilization . . . ought to be disposed in accordance with the philosophic principle already recognized by men of science as that which should govern all classifications. The principal divisions of epochs should offer the most general view of the history of civilization." *Plan des travaux scientifiques nécessaires pour réorganiser la société.* POL. POS., IV, app., pp. 110, 111.

[2] POL. POS., III, p. 621; Eng. tr., III, p. 533.

[3] POL. POS., III, p. 90; Eng. tr., III, p. 75.

[4] POL. POS., IV, p. 204; Eng. tr., IV, p. 180.

[5] The text aims but to present in the most succinct form what might be called the basic principles on which are erected the societal structures that characterize the successive stages of human development; and since these underlying foundations *are* principles, it should be obvious

It is with this first combination of states that the construction of the societal curve must be begun; and the difficulties that arise when sociological phenomena are sought to be represented graphically leap to sight. Two movements must be indicated on the figure: the continuous augmentation of the mass of collective cumulations, and the changes in the methods by which these cumulations are coördinated. On the line BX will be indicated the augmentation of the mass of collective cumulations and on the line BY the variations in the methods of coördination.

The curve that represents the primordial state of sociality begins at the point B, which marks the degree of biological and vital, or organic, evolution at which appeared the sociable animals.[1] But what distance should be assigned this first state on the lines BX and BY? Precision here, as has already been said, is impossible. But it is nevertheless certain that the mass of collective cumulations grew very slowly at the beginning of sociality; and that at the end of this state Man was scarcely to be distinguished from the animal *Homo*. These two affirmations are incontestable; but the words 'very' and 'scarcely' leave much to the discretion of the student. The mass, then, will be measured by the line BD^1 and the method of coördination by the line BF, whence the curve BN. This first element of the curve is that indicated by the name of fetishist destruction. It remains, like all the earlier elements of the curve, almost horizontal at the beginning and rises rapidly towards its end, in order to indicate that the growth of the mass of cumulations involves a slow and spontaneous change in the method of coördination at the beginning of a new state, but a rapid and systematic change at the end, resulting in a relative societal equilibrium.

It will be remarked, in the figure, that after the curve BN representing the state of fetishist destruction comes a second section NO, where an attempt has been made to indicate a second possible division of the primitive state. The first element BN represents in general the stage of human development that man has traversed in common with the animals; but the fetishist state lasted long after this phase of his evolution had disappeared. Every-day experience made it more and more impossible to attribute vitality to all inanimate terrestrial beings or unlimited power to all animate beings; pure destruction revealed

---

that any stage, such for example as the fetishist, i. e. what is currently called the primitive, may present in the concrete a practical infinity of variety, limited only by the limits inherent in the principles on which its structures are built. There is no support here, then, for the belief often expressed that primitive life is less complex and more 'simple' than that of more advanced societies. Simplicity and complexity are terms of comparison of value only for societies on the same cultural plane, not for societies in different stages of societal development. There is no reason why a society based on the underlying principles of 'fetishist destruction' should not be as far removed from 'simplicity' as one based on the principles out of which grows the state of 'scientific enterprise.' And continued investigation of primitive societies makes this fact ever more clear.

[1] Probably at the point of organic evolution marked by the complete separation of the sexes.

limits beyond which small groups can not pass without harmful consequences to themselves. A new form of fetishism then develops; Man seeks in the heavens inaccessible fetishes; and in his acts of destruction, he makes a choice; whence the rise of astrolatry and extermination. The section NO of the curve marks this change. There would be no profit in long consideration of this stage of societal development, the term 'fetishist extermination' sufficiently defining the nature of the combination of the two states, spontaneous and systematic, of primitive culture. Attention may more profitably be turned to the consideration of those states that are more useful for guidance in political art.[1]

But before going further, the results already attained should be more carefully marked. In view of the slow augmentation of the mass of collective cumulations and their importance for subsequent progress, half, BE^1, of the line BX has been given to this fetishist state. On the other hand, for the reason that the method of coördination employed in this state is one of the three distinctive methods revealed by the societal evolution, it has been given a third, BA, of the line BY. As regards the relations between the two elements composing the curve B-O, representing the state of fetishist extermination, BD^1 is twenty times[2] as long as D^1E^1; and BF is one-third of BA. There is no fear that these proportions will be criticized for exaggeration; in fact, it is probable that they are too small.

These proportions having been fixed, it is time to return to the effort to mark out a path for the future study of the relations between

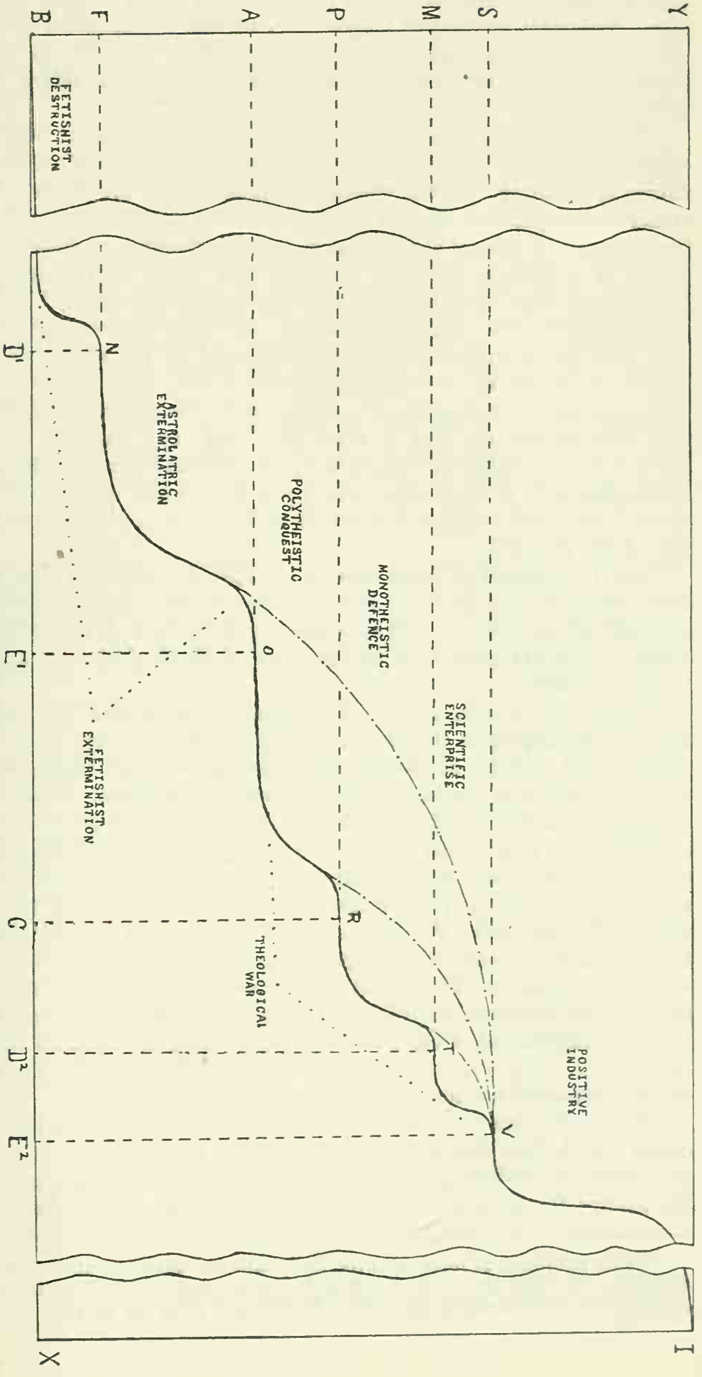
---

[1] It should be clear that an abstract study of societal phenomena, especially one that aims only to present a first approximation of the reality, must deal only with the most elemental phenomena that societal development presents. For this reason, there is no reference in these pages to the problems raised by the various theories of cultural 'diffusion.' Obviously a societal advance must be made somewhere before it can be diffused; and it is with these elemental beginnings that an abstract sociology must primarily be concerned. The importance of diffusion and culture contacts in general, however vital they may be in concrete cases, is clearly less than that of original invention.

Even on this point, however, the abstract study results in certain conclusions of great suggestive value. For example, the position that societal inventions are never made but once is greatly weakened in regard to primitive society by the fact that the principles out of which this societal stage grows preclude any great extension in size as regards societies in this stage. Hence there are at this point in human evolution, a large number of essentially analogous culture areas, each with similar needs. It would seem, then, that the conditions for the appearance of a stone axe, for example, are different from those that led to the appearance of a steam-engine, for the latter appeared in a culture area that has no analogue.

Similarly, the very existence of the phenomenon of diffusion, and in particular the question of the diffusion of a single cultural element to the exclusion of others in the same area, is very likely to be illuminated by the study of the relations between societies on different societal levels.

[2] For obvious reasons the full length of the curve BN cannot be shown in the diagram. Nearly the whole of this section of the societal curve has had to be omitted.


Y
S
M
P
A
F
B
X
I
FETISHIST DESTRUCTION
N
D¹
ASTROLATRIC EXTERMINATION
POLYTHEISTIC CONQUEST
MONOTHEISTIC DEFENCE
O
E¹
FETISHIST EXTERMINATION
SCIENTIFIC ENTERPRISE
R
C
THEOLOGICAL WAR
T
D²
POSITIVE INDUSTRY
V
E²

THE CURVE OF SOCIETAL MOVEMENT

the two societal evolutions by the consideration of the state of theological war. The most general characteristics of this combination of cumulations are the appearance and the development of abstractions, from the intellectual point of view, and of struggle, from the active point of view.

The intellectual movement of fetishism was characterized by concrete observation, whence the cumulation of material of all kinds for future speculation. In the theological state begins the operation of abstract contemplation, and, in consequence, the establishment of properties common to several objects, each property tending to come under the power of a distinct divinity. It is in this phase of the development of sociality, then, that arises science in the proper sense, i. e. the determination of the abstract relations between abstract phenomena.[1] The state of extermination was characterized by the efforts of Man to live in the midst of environing difficulties; the state of war saw the beginning of the struggles of societies with one another. Military effort thus became the end of activity. These two methods of societal coördination, intellectual and active, coincide and produce the state of theological war, to which has been given the central part of O-V of the curve. This part receives a thirtieth, E^1E^2, of the line BX, and a third, AS, of the line BY.

But, to understand more exactly the specific nature of this intermediate stage, as well as to be able to judge of the length of the lines in this part of the curve, it will be necessary to indicate precisely the three divisions already mentioned of the state of theological war, and study them in isolation.

When the process of collective cumulation attains the degree at which it demonstrates the existence of properties common to several beings, i. e. of abstract attributes, the assimilation of all beings whatever to the human type becomes more and more impossible. Fetishism then disappears, and the tendency arises to place under the control of imaginary absolute powers the groups of beings that manifest common attributes, to refer their manifestations to the operation of supernatural motors, to explain the phenomena of which these beings are the seat by wills that differ from the natural wills of fetishism in that they have no definite seats, and in consequence are supernatural. The intellect, under the impulsion of the feelings, creates, through the stimulus of this societal situation, divinities. In practical life, destruction, whether blind or enlightened, gives place to conquest in proportion as the cumulations of collective activity make possible or desirable the conservation of the conquered for the support of the conquerors.

The action and reaction of these two principles results in the state called polytheistic conquest. The growth of abstract thought augments the power of modifying the world, and thus permits the expansion of the group; the expansion and the activity of the group involve a multiplication of abstract thoughts. The societal process thus produces a new phase of sociological development. The various groups make war; and the incorporation of the results of their conquests is favored by the incorporation of the corresponding divinities; the existence of rival divine hierarchies occasions conflicts between their worshippers. Moreover, in the interior of each particular society, the solidarity is strengthened by the fact that "beliefs that cannot be demonstrated and commands that may not be discussed, must render each other mutual support." [1]

---

[1] The problem of determining the relations between the various subdivisions of the state of theological war and the different abstract sciences is here designedly omitted; but see note on p. 188.

To represent on the figure this important stage of human evolution, the distance E^1C is measured on the line BX, a distance almost equal to the distance D^1E^1. On the line BY, the distance AP has been assigned to it, i. e. a little more than a third of the line AS, which represents the theological method of intellectual coördination. The result of these measurements is the curve OR.

The development, by abstraction, of the knowledge of abstract properties becomes more rapid in the state of monotheistic defense. The plurality of wills, absolute and supernatural, is reduced to a single one; or, better, they are all hierarchized under the predominance of a single one of them, who becomes the center of intellectual coördination. The members of this supernatural hierarchy are but the personified representatives of groups of abstract properties, the manifestations of these properties being envisaged as due to the 'will' of the corresponding deity. With the augmentation of abstract cumulations, the notion of a universal order, permitting of numerous subdivisions, is born from this hierachy. The order of the world is envisaged as the result of the commandment of the supreme will, an advance that gives rise to the concept of the 'miraculous.' The cumulation of acts brings with it the rise of several great political incorporations,[1] important but limited in size, of which any one is incapable of conquering all the others, and whose peaceful union is interdicted by the rivalry of the absolute divinities proper to each of them. Greater and greater power of modifying the world, the result of scientific cumulation, weakens the desire and the necessity for conquest by military means, and the rival societies organize themselves for defense about their divinities.

The mass of cumulations growing rapidly in this state, the societal movement becomes more rapid; and the curve representing this development rises more sharply in consequence. It is determined by measuring on the line BX the distance CD^2, half the line E^1C; and on the line BY the distance PM, equal to AP. Whence the curve RT.

The state of scientific enterprise succeeds the state of monotheistic defense. The continuous growth of abstraction gives rise to the conception of law—a conception entirely absolute at first because it is a reduction of the conception of a single supernatural will imposing order on the universe. Man, instead of addressing himself to the single power, strives to master the universe by the discovery of a single natural law. The intellect seeks to replace wills by laws. Science becomes the principle of intellectual coördination. From the point of view of activity, war, aggressive or defensive, ceases to be the final aim of collective effort. The cessation of war more and more frees individuals from any definite or defined societal duty, and enables them to follow pacific activity for personal ends. Societal activity is coördinated by industrial effort instead of war, which brings with it, in this state, the entire dislocation of the societies that engage in it. But this nascent industry is only spontaneous; the idea of competition and struggle survives and gives to enterprise its aggressive, 'imperialistic,' character.

---

[1] Pol. Pos., III, p. 64; Eng. tr., IV, p. 53.

[2] This abstract expression is here used purposely in order to emphasize the nature of the gradual increase in the size of collectivities, and also to avoid the use of such words as 'nation,' 'people,' etc., which would not harmonize with an abstract discussion of societal development.

The natural concordance between the two movements is evident.[1] The cumulation of scientific information furnishes to activity a wealth of technical procedures previously unknown; the unregulated expansion of enterprise multiplies the mass of materials for speculation. This state is transitional by its very nature. It may be considered as the end of theological war or the beginning of positive industry. Here, it will be considered as the end of theological war, because of the retention of absolute tendencies and of struggle. The societal movement is more rapid than ever and the curve that represents it rises very sharply. It is determined by measuring on the line BX the distance D^2E^2, i. e. two-thirds of the line CD^2; and on the line BY the distance MS, a little less than a third of the line AS. Whence the curve TV.

The continuation of the societal process, after the end of the state of scientific enterprise, involves another change in the evolution of sociality. The growth of abstraction attains its limit with the establishment of the various categories of irreducible phenomena; the conception of the relativity of knowledge develops. Positive laws, eliminating all wills, natural or supernatural, setting aside the absolute, theological or scientific, become the principle of intellectual coördination. The mind, recognizing the limits of its domain, constructs a subjective synthesis.[2] True industry, i. e. constructive effort, conceived of, not as a means of struggle, but as the means of maintaining societal life, coördinates all collective activity.

---

[1] A very striking example of the reaction between the theoretical and the practical evolutions is to be found in the improvement of the science of individuality during the societal state of scientific enterprise.

In the first place, sale is the condition of enterprise. Now a sale is an act, and like all acts, must be determined by the feelings. Hence the systematic study of human motive for the purpose of effecting sales,—a study of which modern advertising is the immediate result.

In the second place, enterprise, being based upon industrial activity, requires a knowledge of human nature in order to facilitate the relations between the 'entrepreneur' and the worker.

In both cases, the theoretical development aids the practical, and reciprocally; and so the movement toward positive industry is aided inevitably, although unconsciously, at the same time that the last of the abstract sciences amasses new stores of materials.

[2] "All theoretical progress hitherto accomplished consists essentially,

Between the two elements of the state of positive industry, i. e. between positive laws and peaceful industry, the harmony is perfect and continuous; the uninterrupted development of thoughts, consolidating the results of all previous abstraction, facilitates the evolution of acts. Universal industry, revealing the gaps in knowledge, directs the search for positive laws. The main lines of Science having been drawn, it remains only to develop its secondary laws to the point necessary to perfect activity; industry, having lost all element of competition, has no other end than to use the data of science for obtaining the utmost return possible. The equilibrium between the two elements of the societal system becomes permanent and stable,[1] and the operation of the collective cumulation of thoughts and acts results finally in a normal state, in the words of Comte, that is to say, in a societal state essentially static, represented in the figure by the curve VI, rising sharply, as the mass of collective cumulations of every kind constantly increases, and moving toward a future that in length can be compared only with the earliest stages of human development.

A static state? Then sociological progress is not unlimited? There is no reason to think so. Refer a moment to the societal laws of the preceding chapters. The law of increasing objectivity, for example, is the statement of a geometrical limit. The objectivity of thoughts always increases, but complete objectivity is beyond the reach of man. Of the universe, he comprehends only what his biological organization permits him to understand. With one sense the fewer, his knowledge would be inferior to that which he now possesses. With one sense the more, or with his sense of electrition for example, highly developed, he

---

on the one hand, in showing the impossibility of an objective synthesis, and on the other, in affording, from the labors it occasioned, the scientific basis for a better subjective synthesis." POL. POS., II, p. 135; Eng. tr., II, p. 118.

The most significant commentary possible on Comte's views here is the following passage from P. W. Bridgman, *The New Vision of Science*: "The physicist thus finds himself in a world from which the bottom has dropped clean out; as he penetrates deeper and deeper it eludes him and fades away by the highly unsportsmanlike device of just becoming meaningless. No refinement of measurement will avail to carry him beyond the portals of this shadowy domain which he cannot even mention without logical inconsistency. A bound is thus forever set to the curiosity of the physicist. What is more, the mere existence of this bound means that he must give up his most cherished convictions and faith. The world is not a world of reason, understandable by the intellect of man, but as we penetrate ever deeper, the very law of cause and effect, which we had thought to be a formula to which we could force God Himself to subscribe, ceases to have a meaning." HARPER'S, March, 1929, p. 450.

[1] But it should be remembered that this societal equilibrium does not imply the disappearance of all conflict. The imperfections of human individuality always remain. See POL. POS., III, p. 65; Eng. tr., III, p. 54: "The inevitable struggles that the positive dualism [i. e. the state of positive industry] allows of are due solely to the natural conflicts of human passions, without any source specially due to the corresponding regime."

would envisage the world in a fashion entirely different from that of man as he is today.[1] There is then a definite limit to his knowledge, in so far as its main categories are concerned. Doubtless the cumulation of the results of the collective exercise of the intellectual faculties will never cease, but with each augmentation of the mass of knowledge, the relative importance of each new acquisition diminishes. In other words, for any biological organism whatever, the different classes of observable phenomena are limited in number. Their discovery and reduction to law is the task of Science, and once these classes and their main laws are discovered, there remains but the secondary improvement resulting from the accumulation of details.[2]

In the case of Man, the animal *Homo* societally developed, the process of collective cumulation has given him Science. But in the development of Science, the most striking progress of today is nothing compared to the simplest discoveries of the fetishist period, discoveries without which the scientific elaborations of after times would never have been accomplished. Consider, from this point of view, the astronomical discoveries due to the spectroscope. They have changed nothing in the definitive constitution of astronomy. The smallest improvement made in the nascent period of the science by some forgotten Greek astronomer had more value than these vaunted finds, resulting from the employment of the whole arsenal of modern resources, technical and scientific.[3]

An arithmetical illustration will make the thought more clear. If one begins with unity, and gradually augments it, adding first a half, then a fourth, then an eighth, a sixteenth, and so on, the resulting sum will approach two as a limit. But this limit will never be reached; additions without end may be made; and the nearer the limit is approached, the smaller becomes the value of the fractions to be added; until finally they become infinitely small, and so are insignificant in comparison with the sum already reached. In the same way, precisely, the mass of collective cumulations will never cease to increase, but the societal influence of the last additions will be infinitely small and, therefore, negligible.

---

[1] "Restricted by the small number of our senses, the information that the world provides us with is limited again by the effective scope of each of them. . . . Add to this fatal penury the weakness of our intellectual capacity and we will be forced to the conclusion that never will our conceptions be able to respond to the absolute reality, however great our efforts in this respect. . . . Even if we were to imagine all our resources of sense multiplied and the brain's power of assimilation and combination augmented in the same proportion, our situation would remain essentially the same. For it will never be repeated too often that whether we have few documents or many, the moment we have not *all* of them, our force of induction and deduction might be never so much greater, the combination of these materials could give us but an approximate image of the reality and never this absolute reality." Mendes, LA PHILOSOPHIE CHIMIQUE D'APRÈS AUGUSTE COMTE, p. 20.

[2] "When a science proceeds in conformity with its true nature, its principal theories are presented therein necessarily the first, and all its other speculations tend only to consolidate or perfect these primitive conceptions." POL. POS., I, p. 643.

[3] "All the improvements due to artificial vision followed, instead of preceding, the regeneration of celestial geometry." POL. POS., III, p. 327; Eng. tr., III, p. 274.

It should be clear, then, at last why it has been possible to represent the societal movement, not only by a line, but by a line of definite length, even though it does not possess mathematical exactness. It is clear why half of this line has been given to the state of fetishist extermination. It is clear why there has been given the element VI, representing the state of positive industry, nine-tenths of the remainder of the curve—a distance of course too short, since it represents an indefinite future. It is clear why the state of theological war with its three divisions occupies but a thirtieth of the curve, and probably too much of it at that. Finally, it is clear why Comte was able to speak of this societal state as an "episode"[1] operating an immense transition, a conception that enabled him to rise to the level of a world politics, a brief exposition of which will bring this chapter to a close.

This audacious conception will be found at the end of the first chapter of the *Social Dynamics*,[2] where Comte, after having established the dynamical laws of sociology, emphasizes the fact that they apply only to the original movement that resulted from the natural succession of the most advanced populations, i. e. to the spontaneous movement only of sociality. Now, once the laws of societal evolution have been fully revealed by the study of the spontaneous development, it is possible to guide systematically the course of the societies that have not accomplished all the stages of this evolution, to accelerate with beneficial results the advance of backward civilizations. Comte saw this possibility and strove to furnish to sound politics the positive theory of artificial transitions.

This theory, he said, "is entirely condensed in this great universal principle, resulting from the systematic extension of the great aphorism of Broussais[1]: every modification, artificial or natural, of the real order concerns only the intensity of the corresponding phenomena."[2] "The variations of the universal order," he repeats, "are always limited to the intensity of the phenomena, without ever affecting their succession any more than their nature. Then, however extended or complicated these changes may become, they can not prevent a genuine prevision, fit for guiding intervention." [3]

---

[1] It is especially regrettable at this point that exigencies of space precluded any possibility of presenting the curve of societal movement in full. If the reader will remember that the omitted portions comprise more than nine-tenths of the curve, the episodical nature of the transitional movement from O, and even from N, to V will be more adequately grasped.

[2] Any reader of the SOCIAL DYNAMICS who is sufficiently analytical to distinguish between words and thoughts will perceive that what Comte was dealing with throughout that volume is what is today coming more and more to be called 'culture,' taking the word in its most general anthropological sense. The fact however seems to have been recognized by few, notable among them Professor W. F. Ogburn, in his SOCIAL CHANGE, Huebsch, New York, 1923, p. 41.

It is of course this striking spontaneous movement, arising out of anthropological investigation, toward a return to the very ideas from which the founder of sociology set out that lends force to the appeal to a return to Comte, made in the preface to this volume. And inversely, Comte's conceptions reveal the ulterior significance of the present study of culture, as in the case in point in the text.

The application of this principle of "modificability" to the social movement, continues Comte, will make it easy to discover what there is variable and what there is immutable in human evolution. "First, the general direction of the progression can never change." [4] "In the second place, the natural disposition of the different human phases can no more change than their common direction."[5] "In the succession, normal or abnormal, of these different degrees which produce the various human phases, the continuity always remains intact. The passage is made from one to the other only by means of their intermediaries, in whatever direction the movement is accomplished. Thus the order of the phases remains invariable." [6] That is to say, the intervention of man can change only the speed of societal development.

"Nothing can dispense the human mind from beginning with fetishism, since this state arises spontaneously before our reason admits of any intervention, empirical or systematic, and even anterior to artificial language. Although the other extremity of the theoretical progression can be modified to a greater extent, never will our intelligence be prevented from arriving at full positivity, if its exercise last sufficiently. But between these two opposed terms, the speed with which are traversed the states that connect them admits of sufficient augmentation to be equivalent to the suppression of certain intermediary phases, and even of all."[7] "Positivism could immediately succeed to fetishism without stopping at polytheism."[8] "If then the artificial acceleration of the human movement is susceptible of avoiding any stop at polytheism, with all the more reason is it possible to dispense with monotheism." "The next volume[9] will suitably develop this noble domain that the true theory of the human movement comes to open systematically to our wisdom as regards phenomena eminently modifiable."[1]

---

[1] "Broussais established that the phenomena of disease essentially coincide with those of health, from which they differ only in intensity". Pol. Pos., I, p. 651; Eng. tr., I, p. 527.

[2] Pol. Pos., III, p. 71; Eng. tr., III, p. 59.

[3] Pol. Pos., III, p. 72; Eng. tr., III, p. 59.

[4] Pol. Pos., III, p. 72; Eng. tr., III, p. 60.

[5] Pol. Pos., III, p. 73; Eng. tr., III, p. 61.

[6] Pol. Pos., III, p. 75; Eng. tr., III, p. 62.

[7] Pol. Pos., III, p. 76; Eng. tr., III, p. 63.

[8] Pol. Pos., III, p. 76; Eng. tr., III, p. 64.

[9] Pol Pos., IV, chapter V: "A systematic appreciation of the present, in the light of the combination of the future with the past; whence a general picture of the last transition."

It is precisely such an effort as Comte had in mind that is now in the making in various regions of the world; in certain missionary centers for example and, more significantly, in China and Russia—unfortunately on a purely empirical basis in all these cases.

It is this power of modification that has been represented upon the societal curve by the dotted lines, OV, RV, TV. The most advanced societies can systematically operate their necessary transition from the state of scientific enterprise to the state of positive industry. Backward societies can in like manner be directed towards this final state without their having to pass through the intermediate states, and at last the whole planet will attain to that static societal state dimly seen hitherto only by the eyes of the writers of generous utopias.

But progress, evolution, development of every kind, will they all cease in this far-off period? The response to this question will take the discussion beyond the domain of sociology; and for this very reason, it will show the limits of the science of sociality. Hence this final explanation. It is Comte, who, here as elsewhere, gives the key to the difficulty. "If our theoretical and practical situation were to become immutable," he says in the *Social Dynamics*, "no universal and regular alteration of our moral state would be comprehensible. *There would be possible then only individual variations*, due to the vegetative influences, whose laws, almost unknown up to the present, admit no truly notable collective results, in view of their spontaneous neutralization among the various human types."[2]

The thought of Comte is here on its way to the institution of the science of morals. He does not at this point comprehend all the import of his own words. The vegetative influences, the relations between the physical and the moral, the individual variations—such are the subjects that were to occupy more and more the mind of Comte, and to lead him finally to the science of the individual phenomenon, abstractly conceived. It is these individual phenomena that will receive their full development when sociality shall have reached a statical state; it is these elements of individuality that will be set free, within the limits of the possible, from the fetters of the material, to develop throughout the existence of Humanity. The results of this far-distant period are beyond present vision; the societal curve stops at the point I; but Comte, after having grasped the significance of the science of morals, gave a forecast of these results in his utopia, as astonishing as it is misunderstood, of the Virgin Mother,[3]—a conception that is nothing other than the prevision of that degree of individual development at which the relations between the physical and the moral shall have become so intimate that human procreation will be subject to the will alone of Woman.

---

[1] Pol. Pos., III, p. 77; Eng. tr., III, p. 64.

[2] Pol. Pos., III, p. 11; Eng. tr., III, pp. 9-10.

[3] This conception of Comte's has been the occasion of much absurd comment and still more misunderstanding; nevertheless, it is a logical and inevitable outgrowth of his study of the moral nature of man. The starting point of the idea was the thought, which Comte derived from Harvey, that the function of the male element in procreation is to sup-

Into these sublime regions, the present investigation cannot penetrate. The task of this volume is finished. It sought but to define sociology and to establish its dynamical laws. The societal curve begins at the boundaries of biology and terminates at the first limits of the domain of morals. Vitality is outside its scope as well as individuality; it is concerned solely with the development of sociality, with the laws of but one of the three evolutions of Man.[1]

---

ply only a stimulus to the development of the ovum of the female. But once this thought is comprehended, the suggestion immediately arises that this stimulus may be supplied by other means than those of Nature. This suggestion took two forms in Comte's mind. The first of these is to be found in Pol. Pos., IV, pp. 67-69; Eng. tr., IV, pp. 57-61, where Comte envisages the possibility of finding a purely physical means of procuring conception. This form of his thought is today a scientific commonplace that is the subject of experimentation. The second form this suggestion took is to be found in Pol. Pos., IV, pp. 240-241; Eng. tr., IV, pp. 212-213, where Comte rises to the level at which he is able to envisage the possibility of replacing the requisite physical stimulus by purely moral means, i. e. by means of the reaction of the moral upon the physical. The thought is still audacious, but when it is understood that in it is contained implicitly all that is today currently spoken of as "auto-suggestion," it simply serves to show how far Comte was in advance of his time.

[1] It should be remarked that in the domain of the concrete, these three evolutions are not successive but simultaneous; Man is a being, and so the seat of biological, sociological, and moral phenomena. In consequence, the evolution of these three elements of his life proceeds each at the same time. At present, it is scarcely possible to say whether there is even a question of relative predominance among these evolutions. What is important to remember is that Man is the composite product of these three elements.

CONCLUSION

If the reasoning in the foregoing chapters is sound, then the conclusions already reached constitute safe bases for deduction. It is believed that these premises are valid; and so this final chapter proceeds deductively to establish certain positions of interest to sociological thought.

First, as a result of the analysis of the entire domain of science, it is possible to retrace, in the inverse order, the stages from the objective through which scientific inquiry has had to pass on its way from the objective to the subjective, and in this way to arrive at a statement of the nature of psychology as a science, to divide it into its several divisions, and to state the relations of these divisions to sociology.

Second, it becomes possible to make a definitive statement as to the unity—so long disputed—of Comte's life and thought, and to define his position as regards the science he named and strove to create.

Finally, the relations of the science of sociology to the art of politics in the higher sense are set forth; and in this way the discussion comes to an end in a return to the youthful work of Comte from which it set out in chapter one.

CHAPTER XI.

Conclusion: A Positive Politics.

"MAN," said Saint Gregory the Great, "has in him something of all the creatures: he has being in common with the minerals; life, with the vegetals; sensation, with the animals; intelligence, with the angels."[1] With the words of this great thinker who links the philosophy of antiquity with the philosophy of the Middle Age, the positive spirit is in complete accord. All that science has done since his day is to develop the hierarchy that he dimly foresaw. That is to say, Comte is a true descendant of the great line of philosophers from Aristotle through Saint Gregory and Saint Thomas Aquinas to Descartes. It means also that the encyclopedia that Comte constructed is but the fulfillment and the completion of their labors. It is a truly synthetic view of the whole domain of scientific investigation of which man is capable; it is a marvelous ordonnance of phenomena, in which there is no omission, no point where the perfect continuity of relation is incomplete. Even where the laws of a given group are not formulated, a category, a philosophical *cadre*, is established, ready to receive the facts which will thus be brought within the reach of that systematization without which they are never really in the power of reason. Stage over stage towers this mighty structure of thought, planned by one of the great architectonic geniuses of the world as an habitation for the intellect for centuries to come. Its construction begins with the analysis of the simplest phenomena, the ones most within the reach of man; it continues by the study of materiality, of vitality, of sociality, and culminates in individuality.

This imposing monument of Science results from the cumulation of the collective attempts to analyze the enormous mass of phenomena that presented themselves to the mind of man at the beginning of his societal life. The first materials were furnished by long, patient efforts to study the objective world, to reduce it to classes of phenomena, and to find the laws governing each class. It represents therefore a movement from the objective to the subjective, with the study of which it reaches its final stage. First Mathematics, i. e. Logic, underwent this analysis, then Physics in the broad sense, and finally Psychics. It is this last stage of scientific effort that the present generation must aid in traversing. It is to it, to its importance, that this volume has called attention. The analysis of Psychics began with the work of the founders of abstract biology; it terminates with the institution of a science of morals. Between these extremes stands the science devoted to the study of societal phenomena. The three present themselves as a regular gradation from vitality to individuality by way of sociality, all conceived of from the abstract point of view.

---

[1] Farge and Barbedette, COURS DE PHILOSOPHIE SCOLASTIQUE, Paris, 1920. "Omnis creaturæ aliquid habet homo: habet namque homo commune esse cum lapidibus, vivere cum arboribus, sentire cum animalibus, intelligere cum angelis." P. 191, vol. II.

The result of this study, with its final arrival at the subjective, is the possibility of a return of the mind from the subjective to the objective, by means of a retracing of the path already traversed. The intellect can thereby judge of the results of the study of the objective in the light of a single criterion, and in consequence regulate them methodically. It can also thereby throw light into the obscurity that now envelops the higher sciences of the hierarchy; and so can distinguish the fundamental problems from the secondary ones. Last of all, it can determine precisely the abstract elements of which a given concrete science is composed.

On the path thus traversed from the subjective to the objective, the first[1] science is that which Comte called morals, the science whose object is the study of the phenomena at the base of the individual life of organisms. It is in Man, by reason of his societal development, that this individual life has been most highly developed. He, therefore, is the standard by which all such development must be judged. Human individuality, when submitted to analysis, reveals the existence of a limited number of elements, the elements of human nature. These elements, according to the analysis of Comte, are eighteen in number,—eighteen unit-factors of mind in the general sense of the word.[2] At the basis of these elements are the affective motors, the feelings, personal and social. They are the ultimate 'causes' of human action. They are the fundamental 'urges,' the human 'needs,' the human 'hungers,' the 'instincts,' capable of spontaneous activity, that impel men to all their achievements. They are the specializations of that inner spontaneity which is the final source of life. It is the stirring of these instincts that is the point of departure of human existence. With the study of them the man who aspires to guide, control, direct the life of Humanity must begin his labors. It is to the empirical knowledge of these individual motor forces that is due the influence of the great religious geniuses of the world. It was upon his systematic knowledge of them that Comte strove to establish a positive religion.[1]

---

[1] "In every case, the action of the milieu, whether social or physical and biological, is weak throughout the individual life, for it does not modify the innate personality and it acts in concurrence with the latter only upon the acquired personality: these considerations demonstrate the independence of psychology with respect to sociology, and justify the distinct places assigned to them by practically all philosophers in the classification of the sciences." Achille-Delmas and Boll, LA PERSONNALITÉ HUMAINE, p. 130.

The science of individual life has, no doubt, its distinct place in the hierarchy of the sciences: but this place is at the summit of the hierarchy and not between biology and sociology where practically all philosophers and scientists today agree in putting it.

[2] See, in the appendix, the Cerebral Table, in which Comte divides human nature into affective motors, intellectual faculties, and practical qualities.

No doubt, this category of individual elements comprises the intellect and the activity as well as the feelings, but the importance of the first two is secondary compared with that of the last. The intellectual faculties serve only to throw light upon, and the practical qualities to attain, the ends set by the affective motors. Conduct, whatever its form, finds in them its point of departure. But these motor forces do not manifest themselves in the void. However spontaneous they may be in their origin, their exteriorization is conditioned by a quantity of factors. The first in importance among these factors are societal phenomena. The cumulations that result from collective life comprise the most important of the elements that constitute the milieu in which the feelings are exercised.[2] It is true, no doubt, that the phenomena of sociality are psychical; but they are none the less objective for all that. The intellect, it will be recalled, is distinct from the feelings. It constitutes a special group of the unit-factors of mind. At first, it is entirely under the domination of the feelings, the propensities, but it comes ultimately to condition the exercise of the latter. This result is accounted for by the fact that the intellectual faculties present to the affective motors images of the results of collective cumulation and thus excite, stimulate, and activate them. It is, therefore, by means of the intellectual faculties that sociality conditions individuality.

But in addition to the influence possessed by the intellect when it pictures to the primary instincts the results of sociological development, it possesses another that can only be understood in the light of the dynamical laws of sociology that have been defined in this volume. Societal phenomena evolve according to fixed laws. They therefore present a regular succession of sociological milieus. In some one of these milieus, the feelings must be exercised. Hence there is an appeal, always different, to the affective motors, sometimes to one of them, sometimes to another, with the result that they are all, in their turn, developed.[3]

It results from the foregoing that the principles on which depends the direction of the conduct of man must flow not only from a knowledge of the sources of action but also from that of the societal milieu in which this direction is to be effected. In other words, conduct is relative not only to the inherent force of the affective motors but also, in addition, to the degree of societal development. Here is the explanation of the two directly opposite beliefs so frequently expressed concerning human nature. Human nature, it is said on the one hand is invariable; it is, it is said on the other hand, always in transformation. The positive point of view is the following: the elements of human nature are relatively few in number. This number is unalterable, although the constituent elements may vary in intensity. But this small and fixed number of affective motors is diversely stimulated by the series of successive societal situations evolving according to positive laws. Hence there is an uninterrupted change in the manifestation of these motors, an ever different combination of the same elements. The two beliefs are thus reconciled when they are given the same positive basis. Hence the two sciences—societal and individual or moral—complement one another, and their combination makes possible the explanation of the most important phenomena of conduct, whether of societies or of men.

---

[1] "We can direct our own behavior and influence that of our kind only by taking into the most careful account these characters of the innate personality." Achille-Delmas and Boll, LA PERSONNALITÉ HUMAINE, p. 91.

"It is only when we shall have become acquainted with the hidden springs that contribute to the determination of our actions that we shall learn to lead men." Gall, SUR LES FONCTIONS DU CERVEAU, Paris, 1822-1825, IV, p. 67.

[2] Sociology "determines the fundamental direction of all our tendencies whatever." POL. POS., IV, 3.

[3] "The exterior world radically modifies the affections, without having any direct relations with them. It stimulates some of them and represses others according to the opinions and the acts that are provoked by our theoretical and practical situation." POL. POS., II, pp. 25-26; Eng. tr., II, p. 23.

Yet this combination of sociology and morals is not the only one. There are still other influences to be determined before conduct, especially that of the individual being, can be accounted for. First, there is the biological influence. Individuals are organisms and consequently subjected to the organic conditions common to all living beings. The physical factor should never be separated from the moral factor when it is a question of determining the laws of conduct. The spontaneity of the moral elements is always conditioned by biological limitations. Science is far from knowing today how far this dependence can be surmounted; in fact, nothing but the development of the science of morals will be able to reach the answer to this question.

There remains, besides, a last conditioning influence to be mentioned. For the sake of convenience, this influence will be referred to as that of 'materiality.' That is to say, the conditioning effect of all the laws belonging to the sciences that compose Logic and Physics: Cosmology, to use the term that Comte adopted for the sciences that extend in the hierarchy from mathematics to biology.[1] Here must be sought the materials whose importance has been so exaggerated in recent times by the anthropo-geographers, the social geographers, in general. It is only after having enumerated and evaluated each of these factors that it is possible to arrive at sound conclusions concerning the problems of human conduct. It is only after having traversed the scientific scale from the subjective to the objective that all the elements of which the human being is composed can be re-assembled.

---

[1] Comte was the first to combine Logic and Physics under the name, "essentially at our disposal today, of *cosmology*. The old acceptation of this term has fallen into disuse sufficiently to enable us henceforth to apply it to this collective destination, quite in conformity with the true spirit of its original construction, in order to avoid the creation of a more suitable word. It needs only to have its etymological sense purified, by substituting therein the relative idea of the world for the absolute idea of the *universe*." POL. POS., I, p. 438; Eng. tr., I, p. 355. (Comte's italics).

This chapter, however, is particularly interested in the three highest sciences of the encyclopedia, those, namely, that compose Psychics. It is there only that is to be found the explanation of the confusion existing today in the sciences called psychical and social. The principal source of this disorder is the neglect of the distinction between the abstract sciences and the concrete sciences. The majority of psychical and social sciences appeared long before the establishment in theory of the two types of sciences, and they were all developed before the domain of Psychics had been divided into its three parts. It is necessary, therefore, to analyze these concrete sciences into their abstract constituent elements, this operation being made possible by the examination of the abstract hierarchy, beginning at the subjective.

The abstract encyclopedia is composed of seven sciences, and since they exhaust the sum total of phenomena observable by man, all other sciences must of necessity be concrete. They may comprise, in varying degrees, a greater or smaller number of abstract elements. This detail, however, has no importance. Analysis, in the light of the fundamental sciences, will be able to discover their constituent elements. The problem is simplified by the fact that there are in question here only the combinations of the three superior sciences of the hierarchy: biology, sociology, and morals.

In the first place, then, there is a concrete combination of the three specific qualities at the top of the encyclopedic scale: the vital, the societal, the moral. When these three classes of phenomena are combined, a 'living' being is obtained, in the complete sense of the word, whose manifestations are of three orders, and not merely biological, as the word 'living' is so often understood. There is great difficulty here in finding proper expression for the thought, because phenomena envisaged from the positive point of view have to be discussed in terms created when the facts involved were viewed only from the theological or metaphysical point of view.[1]

In the study of life in all its plenitude, three modes of being must be successively considered: the biological, the sociological, and the individual, and then the various combinations of the three. As a whole, they constitute the manifestations of the psychical life. Conduct, behavior, in short, whatever its kind, results from the combination of these irreducible phenomena. This way of viewing the matter is amply justified by the empirical division of human facts into physical, mental (i. e. societal), and moral. The analysis of the concrete science that deals with the ensemble of phenomena belonging to the three sciences that compose Psychics may therefore be considered as achieved; and the laws of this science should, in theory at least, be deduced from the laws of vitality, sociality, and individuality. To this concrete science[1] will here be given the name of Individual Psychology.

---

[1] The difficulty is somewhat analogous to that which a Greek of Aristotle's time would have felt if he had been called upon to discuss, in the vocabulary of his day, the modern divisions of Physics. Particularly puzzling would have been the distinction between chemistry and physics proper. In the same way, the distinction between sociology and morals is difficult to grasp at the present time.

But there is another case to be considered. If biological phenomena are set aside, a new combination is obtained comprising but the last two sciences of the scientific hierarchy, sociology and morals. This combination gives rise to the study of what are commonly called societies, i. e. the groupings that are determined by the action of the individual or moral elements under the conditioning influence of the results of the societal process. There is then a concrete science of the conduct, the behavior, of societies, as well as a science of the behavior of men considered as individuals, and this science deals with the 'life' of societies. It will here be called the science of Social Psychology.[2]

In this way, two words that have had hitherto a vague meaning obtain the precision that they lacked and can henceforth be used without danger of confusion. 'Social' is the adjective applying to the composite phenomena studied by the concrete science that results from the combination of the abstract sciences of sociology and morals. This science is the science of societies, 'social' being equivalent to 'sociomoral.' In a quite similar fashion, 'psychological' is the adjective called for by the concrete science that combines the data proper to the abstract sciences of biology, sociology, and morals. This science deals with individuals; and the term 'psychological' is equivalent to bio-sociomoral.[3]

When the still more concrete sciences now loosely termed 'social' are studied, the problem of analysis becomes more difficult, for these sciences include other phenomena than the psychical although the latter remain their principal object. They are made up, in fact, of elements borrowed from the various abstract sciences, combined in different proportions for different purposes. Thus politics, i. e. the concrete science that underlies the art of government, is above all sociological in essence, although it must employ to a considerable extent a knowledge of biology and of morals if it is to arrive at any durable results. Economics, on the other hand, is above all moral; and it presents the anomaly of studying only those elements of individuality to which Comte gave the general name of Interest, i. e. the egoistic and personal affective motors. Many of the alleged laws of this political economy are but inductions that belong to the science of morals. Gresham's Law, for example, has no other significance; and the same might be said of the law of 'supply and demand' as it ordinarily understood.[1] As for ethics, it is a combination in equal parts of sociology and morals; the first being indispensable to the enlightenment of the second in any given societal situation. Finally, the science of law, (juridics), presents still another combination of the same elements, but with a different purpose.[2] These examples show how all the different possible concrete combinations increase in number and specialization until they reach the point at which they enter into the domain of the practical reason in the narrow sense; they are an illustration of the remark already made that the improvement of the abstract sciences will some day attain the degree at which the concrete sciences as they exist at present will be destroyed and replaced by special combinations made in view of particular purposes,—by the social engineer who will be the organ of this social function.[3]

---

[1] "Psychology, as we conceive of it, proposes to determine the manifestations of an individual in the presence of this or that event (psychodynamics), if we know both his instincts, dispositions, and innate aptitudes (innate personality) and the imprint that has been left upon him by the phenomena in which he has participated in the past (acquired personality)."

"Prevision in psychology is practically of the same order as in meteorology." Achille-Delmas and Boll, LA PERSONNALITÉ HUMAINE, p. 247.

Precisely . . . but meteorology is the classical example of a concrete science. See page 28 of this volume.

[2] See in the appendix the plate representing the hierarchy of the sciences.

[3] A third possible case may be imagined: the combination of biology with morals. As a matter of fact, this combination has already been operated, comparable in Psychics with the combination of astronomy with chemistry in Physics. This combination constitutes Phrenology, and all the objections raised against the phrenologists find their ultimate justification in the illegitimacy of the scientific union the latter strove to effect.

The analysis just made presents another interest more directly related to the subject of this volume. It makes possible a complete explanation of the evolution and development of the intellect of Comte, and gives a last proof that his sociology was essentially a composite and concrete construction.

When Comte began his labors, biology alone had been set apart from the sum of phenomena belonging to Psychics. Hence the belief that the remaining phenomena composed only a single category: that of social phenomena, for the study of which he created the science of social physics. In fact, as the preceding analysis has shown, Comte was in presence, not of a single category, but of a combination of phenomena, collective or societal and individual or moral. In other words, Comte was dealing with social psychology as defined above. His later meditations revealed to him the fact that social phenomena were not specific but reducible. When he finally saw the full significance of this discovery, it was possible for him to revise in detail his work as a whole, and to assign to its proper place each abstract element. This revision he made in the fourth volume of the *Positive Politics*. He would certainly have set forth with still greater emphasis the final results of his meditations in the volume on morals that death prevented him from writing; but the important thing was the distinction he established between the two classes of phenomena, collective and individual, and this distinction stands forth with clarity in his last works.

---

[1] In which form it is nothing more than the law of need and greed.

[2] Esthetics, it might be added, is based exclusively upon the abstract science of morals, and it will not emerge from the dense fog of metaphysics that now obscures it until this final science of the abstract hierarchy has become positive.

[3] He is already developing under the guidance of what is today called 'scientific management.'

In addition, the preceding analysis has the great advantage of answering definitely the question of the unity of Comte's work. Much of what has been said on the subject lacks point. It has never been sufficiently understood that Comte was not a philosopher in the ordinary meaning of the term, i. e. he was not a philosopher, so to speak, by profession. He was in the highest degree a social renovator. His main purpose, from the very beginning of his career, was to renew the political and social life of mankind by giving it a positive basis. Whatever turn his thought may have taken, it was always with this aim in view. Judged in this light, the works to which he owed his fame were but incidents, and marked only the stages in his advance. He undertook the writing of the *Positive Philosophy* not for philosophical reasons in the narrow sense, but for practical purposes, that work being intended to show how the sciences had developed, and how from this development could be drawn the method necessary for putting politics on a scientific foundation. When he advanced from philosophy to religion, it was only after having discovered—and here was the point of departure of the science of morals—that the primary source of conduct is the feelings, the affective motors, and that religion is the only force capable of controlling these motors. In short, Comte belongs with the philosophers by virtue of his works, not by virtue of his intentions. Never did he have an ambition to construct a system of thought. [1] Rather did he set out to find the laws that underlie political phenomena, and in the course of his investigations he was compelled to traverse the entire field of philosophy. He was an explorer in the domain of speculation, not a maker of systems. In the intellectual world he was not a Hegel but a Magellan.

Like many another explorer, he made errors in selecting his route. The circumstance was unavoidable, for he was exploring an unknown territory. It was precisely one of these errors that explains why the last part of his work has been so often criticized. The reader of the opening chapters of the *Social Statics* is incontestably struck by the difference in spirit and method between the *Philosophy* and the *Politics*. The deductive nature of the *Social Statics* is a significant example of this difference, which seems at first sight to result from an abandonment of the methods and principles laid down in the *Positive Philosophy*. The proper defense here is not a denial, but a plea of confession and avoidance. In reality, Comte did not abandon his principles, and the difference noted results solely from the error pointed out above, namely, the failure to recognize the concrete nature of social physics.

---

[1] "I have devoted my life to the organization of an ensemble of conceptions." Comte, in a letter to Madame Austin, April 4, 1844.

The phenomena that Comte considered as biological at the moment he was writing the sociology of the *Positive Politics* were in reality moral. Their study, instead of being prepared in the science of biology and completed in that of sociology—as he thought when he wrote the *Social Statics*—was independent of these two sciences, and was destined to occupy, in the scientific scale, a position higher than either of the other two. His attention, therefore, was concentrated upon a concrete science, composed of sociological and moral phenomena, and what he was actually writing was a social psychology as already defined in this chapter.[1] Hence the necessarily deductive form of his reasoning, filled, nevertheless, with striking inductive elements, as has been shown in the sixth chapter of this volume. To hold that this inevitable error destroys the unity of the life or work of Comte is totally unjustifiable, for not only did he discover the mistake and its cause, but he corrected it. His intellectual integrity is put beyond question by the frankness with which he avows his misconception, and by his intention to repair its effects in the projected volume on the new science of morals, the volume in which he would have attained the complete rationality to which he always aspired. If, then, by his *Philosophy* Comte was an Aristotle, if by his *Politics* he did the work of a Saint Paul, by his sociology he was a Moses, dying in full sight of the Promised Land.

But if Comte never wrote a completely abstract sociology, he established its main outlines and he formulated its leading conceptions, from which his successors will never depart without danger. Not only did he, the first, conceive of the possibility of a science of sociology—as is admitted universally—but he constructed the frame-work for its ultimate development. Not only did he clearly understand the basic phenomenon of sociology, i. e. social transmission—a conception that this volume does but elaborate from the abstract point of view—but he furnished in statics and dynamics the great systematic divisions that every sociologist has been compelled to adopt. And by these high achievements, he attained the goal that he had never, even for a moment, lost from sight: the establishment of the positive knowledge necessary for the systematic and conscious direction of the political life of man.

It is in the first of these divisions of the science of sociology that the politician,[2] the statesman, will find the counsels that will enable him to guide the life of society toward health and happiness. Knowing that the life of every society consists in a continuous process of collective cumulation, he will understand how dangerous, how contrary to the general welfare, are all the influences that embarrass or prevent the operation of this process. Understanding the statical conditions of societal life, he will be able to avoid any policy that might arrest or retard its normal growth. Accumulation, communication, association, direction—everything that interferes with these essential conditions is harmful to the maintenance, to the very life, of a society. The duty of the politician is to see that these indispensable conditions are always realized and improved. Only in this way can social order be safeguarded.

---

[1] No implication is in any way intended here that Comte's misconception renders his work valueless. On the contrary, it contains suggestions of the greatest theoretical significance. To cite but a single example, his third sociological law, the law of affective evolution, excluded from this volume for reasons already made plain (p. 173), should ultimately serve as the very foundation of social psychology as above defined. See POL. POS., III, pp. 67-70; Eng. tr. III, pp. 55-59.

[2] This term is not here employed with the disparaging sense that has too often been given it by popular feeling, but with the higher, nobler meaning that a future, enlightened by the positive science of politics, will be able to give it.

The safe-guarding of social order, is, however, but half the duty of the politician. The development of order brings with it progress; and here again society has need of guidance. Spontaneous progress may produce social disorders; it has produced them in the past, when political art was necessarily empirical. The politician enlightened by societal dynamics will be able to avoid these perils. To succeed in this regard, his first task is to determine exactly the place his society occupies in the abstract evolution of sociality, to measure its growth in the light of the societal curve. Then he will be in possession of a sure indication which will permit him to orient his efforts in the direction of societal evolution. Conscious of the tendency of this movement, he will know the nature of the changes to effect in the political institutions of his society in order to transform them wisely into the institutions of the future. This adaptation is one of his most imperious duties, for the statesman can do nothing but retard or accelerate the sociological movement. If he strives to arrest it, he will conduct the society with whose welfare he is charged to revolution or to death.

In conclusion, then, the lofty social aspirations of the author of the *General Separation between Opinions and Desires* have been essentially realized. The foundations for a political art have been laid and the frame-work erected. Society must decide if it wishes to profit by these results of positive science. Of course its teachings can be disregarded, just as can be done with respect to the achievements of any other science. But this attitude is fraught with peril. Never are the laws of any science slighted with impunity. The ignorance, whether deliberate or not, of a people and its guides is always punished in some fashion, the penalty being proportioned to the gravity of the fault. Societal evolution never ceases. If a given society will not submit to the conditions requisite for its normal operation, the evolution will be accomplished elsewhere.[1] A law of science has value only in the measure to which it is applied. To complement laws, said Comte, wills are necessary. If, then, truly scientific bases can be given for politics—and this whole volume has been an attempt to show that they can be—there is no excuse for the retention of empirical procedures and expedients, however good the intentions that prompt them may be. The following of such routine methods does but betray either ignorance or the deliberate intention to subordinate social welfare to particular interests. On statesmen, on politicians, rests the responsibility for the choice.

---

[1] In this connection, Comte's letter to Reschid Pascha in the preface to the *Social Dynamics*, POL. POS., volume III, will repay careful study.

If they are worthy of their responsibility, if they are true guides of their City, they will seek in abstract sociology the positive knowledge on which their art must be based: and their search will not be in vain; they will find there the means for assuring the continuous vigor, the uninterrupted and peaceful growth of the Humanity of which Auguste Comte was one of the greatest servitors.

THE END.

APPENDIX

(AIMER, PENSER, AGIR)

AGIR PAR AFFECTION, ET PENSER POUR AGIR

PRINCIPE

IMPULSION (LE COEUR)

10 MOTEURS AFFECTIFS
Penchants dans l'etat actif; et sentiments dans l'etat passif

- 7 PERSONNELS — Egoisme
  - INTÉRÊT .
    - Instincts de la conservation. . .
      - de l'individu, ou *instinct nutritif* .... (1)
      - de l'espèce. . . .
        - *instinct sexuel* .... (2)
        - *instinct maternel* ...... (3)
    - Instincts du perfectionnement.
      - par destruction, ou *instinct militaire* .... (4)
      - par construction, ou *instinct industriel* (5)
  - AMBITION
    - Temporelle, ou Orgueil, besoin de domination .... (6)
    - Spirituelle, ou Vanité, bosoin d'approbation .... (7)
- 3 SOCIAUX — Altruisme
  - Spéciaux
    - ATTACHEMENT .... (8)
    - VÉNÉRATION .... (9)
  - Général
    - BONTÉ ou amour universel (sympathie), *humanité* .... (10)

MOYEN

CONSEIL (L'ESPRIT)

5 FONCTIONS INTELLECTUELLES

- CONCEPTION. .
  - Passive ou Contemplation d'où matériaux objectifs
    - Concrète, ou relative aux êtres, essentiellement *synthétique* .... (11)
    - Abstraite, ou relative aux événements, essentiellement *analytique* .... (12)
  - Active ou Méditation d'où constructions subjectives
    - Inductive, ou par comparaison, d'où *Généralisation* .... (13)
    - Déductive, ou par coordination, d'où *Systématisation* .... (14)
- EXPRESSION. .
  - Mimique, orale, écrite, d'où *Communication* .... (15)

RESULTAT

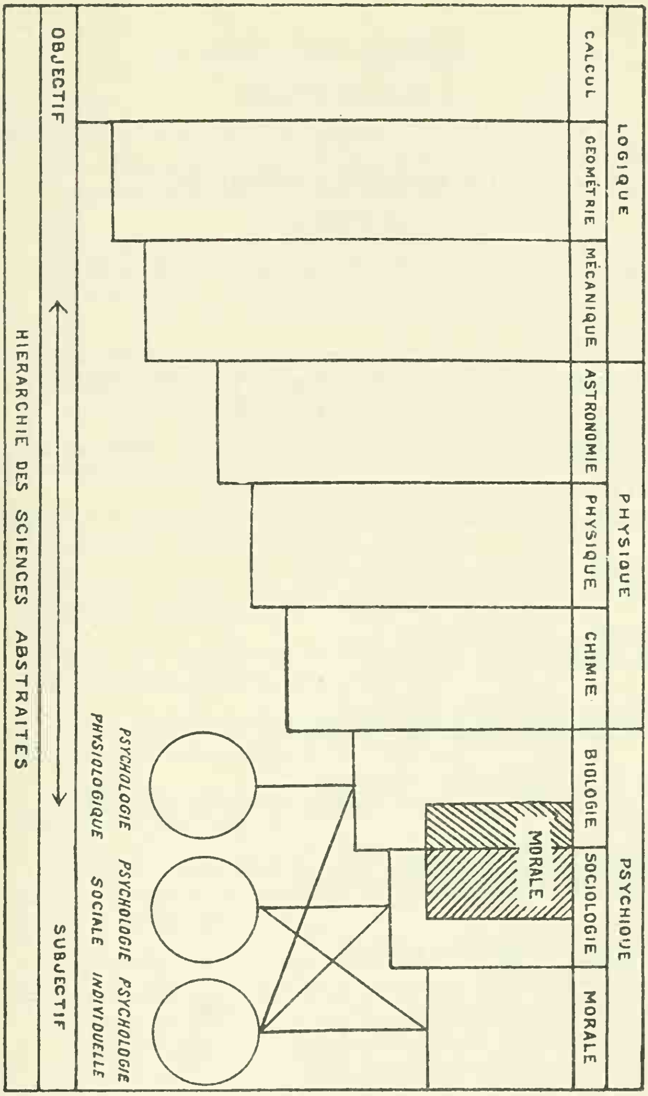
EXÉCUTION (LE CARACTERE)

8 QUALITÉS PRATIQUES

- ACTIVITÉ. . .
  - Courage .... (16)
  - Prudence .... (17)
- FERMETÉ. . . .
  - d'où *Persévérance* .... (18)

Classification Positive Des Dix-Huit Fonctions Intérieures Du Cerveau

(D'après le Tableau Cérébral d'Auguste Comte)


LOGIQUE
PHYSIQUE
PSYCHIQUE
CALCUL
GÉOMÉTRIE
MÉCANIQUE
ASTRONOMIE
PHYSIQUE
CHIMIE
BIOLOGIE
SOCIOLOGIE
MORALE
MORALE
PSYCHOLOGIE PHYSIOLOGIQUE
PSYCHOLOGIE SOCIALE
PSYCHOLOGIE INDIVIDUELLE
OBJECTIF
SUBJECTIF
HIERARCHIE DES SCIENCES ABSTRAITES

Plan du Volume
sur
LA MORALE THÉORIQUE
INSTITUANT
LA CONNAISSANCE DE LA NATURE HUMAINE[1]

Introduction.
    Philosophie première, philosophie seconde, morale théorique.

Chapitre I.—*Théorie cérébrale.*
    (Fonctions intérieures, fonctions extérieures, innervation).

Chapitre II.—*Théorie du Grand-Etre.*
    (Famille, patrie, humanité).

Chapitre III.—*Théorie de l'unité.*
    (Union, unité, continuité).

Chapitre IV.—*Théorie vitale.*
    (Existence, santé, maladie).

Chapitre V.—*Théorie du sentiment.*
    (Personnalité, sociabilité, moralité).

Chapitre VI.—*Théorie de l'intelligence.*
    (Raison abstraite, raison concrète, harmonie mentale).

Chapitre VII.—*Théorie de l'activité.*
    (Pratique, philosophique, poétique).

Conclusion.
    Synthèse, sympathie, religion.

---

[1] This plan is the work of Comte's own hand. It is dated February 1, 1857, and so gives practically the only systematic guide to the development of Comte's thought on the seventh science in the hierarchy after the completion of the POSITIVE POLITICS. In the course of the year's meditation that was to precede the actual composition of the volume, Comte died, September 5, 1857.

SELECTED BIBLIOGRAPHY

AUGUSTE COMTE

OPUSCULES PRIMITIFS.

Séparation générale entre les opinions et les désirs. (1819).

Sommaire appréciation de l'ensemble du passé moderne. (1820).

Plan des travaux scientifiques nécessaires pour réorganiser la société. (1822).

Considérations philosophiques sur les sciences et les savants. (1825).

Considérations sur le pouvoir spirituel. (1826).

(All these early essays are to be found in the general appendix to the *Système de Politique positive,* volume IV, and in *Early Essays on Social Philosophy,* an English translation by Henry Dix Hutton. Routledge and Sons, London.)

COURS DE PHILOSOPHIE POSITIVE, 5th edition, La Société Positiviste, Paris, 1892-1894.

Volume I, containing the *Préliminaires généraux* and the *Philosophie mathématique.* (1830).

Volume II, containing the *Philosophie astronomique* (1834), and the *Philosophie physique* (1835).

Volume III, containing the *Philosophie chimique* (1835), and the *Philosophie biologique* (1836-1837).

Volume IV, containing the *Partie dogmatique de la Philosophie sociale* (1839).

Volume V, containing the *Partie historique de la Philosophie sociale, en tout ce qui concerne l'Etat théologique et l'Etat métaphysique* (1840-1841).

Volume VI, and last, containing the *Complément de la Partie historique* and the *Conclusions générales* (1841-1842).

(These volumes have been condensed in English by Harriet Martineau, 3 vols., Bohn edition, and in French by Jules Rig, 2 vols., Baillière et Fils, Paris, 1881.)

SYSTEME DE POLITIQUE POSITIVE, or *Traité de la Sociologie instituant la Religion de l'Humanité*, 4th edition, Crès et Cie., Paris, 1912.

Volume I, containing the *Discours préliminaire* and the *Introduction fondamentale* (1851).

Volume II, containing the *Statique sociale*, or *Traité abstrait de l'ordre humain* (1852).

Volume III, containing the *Dynamique sociale*, or *Traité général du progrès humain.* (*Philosophie de l'histoire*) (1853).

Volume IV and last, containing the *Tableau synthétique de l'avenir humain* (1854).

(These volumes were translated into English under the title of *The Positive Polity.* Longmans, Green and Co., London, 1875-7.)

SYNTHESE SUBJECTIVE, or *Système universel des Conceptions propres à l'Etat normal de l'Humanité.*

Volume I (the only one written out of four projected), *Le Système de la logique positive*, or *Traité de philosophie mathématique*, 2nd edition, L'Exécution Testamentaire, Paris, 1900.

Pierre Laffitte

COURS DE PHILOSOPHIE PREMIERE.

Volume I, containing *La Théorie générale de l'entendement.* Bouillon, Paris, 1889. La Sociéte Positiviste, Paris, 1928.

Volume II, containing *Des Lois universelles du monde.* La Société Positiviste, Paris, 1894.

R. Teixeira Mendes

La Philosophie chimique d'après Auguste Comte. Centre Positiviste, Rio de Janeiro, 1887.

William Graham Sumner

Folkways: A Study of the Sociological Importance of Usages, Manners, Mores, and Morals. Ginn and Co., Boston, 1907.

Etienne Rabaud

Eléments de la Biologie générale. Alcan, Paris, 1920.

F. Achille-Delmas and Marcel Boll

La Personnalité humaine: son analyse. Flammarion, Paris, 1922.

HM 55
C8 D433

END OF APPENDIX

Patriot Publishing Company
Putnam, Conn.

University of British Columbia Library

DUE DATE

FEB 27 1976
FEB 29 1976 RET'D
OCT 23 1979
OCT 23 1979 RET'D
DEC 14 1986
DEC 22 1986 RET'D

FORM 310

UNIVERSITY OF B.C. LIBRARY
3 9424 02000 7412